

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**.00 → .15**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14		.15
<b>0°</b>	90.0	89.4	88.9	88.3	87.7	87.1	86.6	86.0	85.4	84.9	84.3	83.7	83.2	82.6	82.0	81.5	<b>0°</b>
<b>5</b>	90.0	89.4	88.9	88.3	87.7	87.1	86.6	86.0	85.4	84.9	84.3	83.7	83.2	82.6	82.1	81.5	<b>5</b>
<b>10</b>	90.0	89.4	88.9	88.3	87.7	87.2	86.6	86.1	85.5	84.9	84.4	83.8	83.3	82.7	82.1	81.6	<b>10</b>
<b>4</b>	90.0	89.4	88.9	88.3	87.8	87.2	86.7	86.1	85.6	85.0	84.5	83.9	83.4	82.8	82.3	81.7	<b>4</b>
<b>8</b>	90.0	89.5	88.9	88.4	87.8	87.3	86.7	86.2	85.6	85.1	84.6	84.0	83.5	83.0	82.4	81.9	<b>8</b>
<b>20</b>	90.0	89.5	88.9	88.4	87.8	87.3	86.8	86.2	85.7	85.2	84.6	84.1	83.6	83.0	82.5	82.0	<b>20</b>
<b>2</b>	90.0	89.5	88.9	88.4	87.9	87.3	86.8	86.3	85.8	85.2	84.7	84.2	83.7	83.1	82.6	82.1	<b>2</b>
<b>4</b>	90.0	89.5	89.0	88.4	87.9	87.4	86.9	86.3	85.8	85.3	84.8	84.3	83.7	83.2	82.7	82.2	<b>4</b>
<b>6</b>	90.0	89.5	89.0	88.5	87.9	87.4	86.9	86.4	85.9	85.4	84.9	84.4	83.8	83.3	82.8	82.3	<b>6</b>
<b>8</b>	90.0	89.5	89.0	88.5	88.0	87.5	87.0	86.5	86.0	85.5	85.0	84.5	84.0	83.5	83.0	82.5	<b>8</b>
<b>30</b>	90.0	89.5	89.0	88.5	88.0	87.5	87.0	86.5	86.0	85.5	85.1	84.6	84.1	83.6	83.1	82.6	<b>30</b>
<b>1</b>	90.0	89.5	89.0	88.5	88.0	87.5	87.1	86.6	86.1	85.6	85.1	84.6	84.1	83.6	83.2	82.7	<b>1</b>
<b>2</b>	90.0	89.5	89.0	88.5	88.1	87.6	87.1	86.6	86.1	85.6	85.2	84.7	84.2	83.7	83.2	82.8	<b>2</b>
<b>3</b>	90.0	89.5	89.0	88.6	88.1	87.6	87.1	86.6	86.2	85.7	85.2	84.7	84.3	83.8	83.3	82.8	<b>3</b>
<b>4</b>	90.0	89.5	89.1	88.6	88.1	87.6	87.2	86.7	86.2	85.7	85.3	84.8	84.3	83.8	83.4	82.9	<b>4</b>
<b>5</b>	90.0	89.5	89.1	88.6	88.1	87.7	87.2	86.7	86.3	85.8	85.3	84.9	84.4	83.9	83.5	83.0	<b>5</b>
<b>6</b>	90.0	89.5	89.1	88.6	88.1	87.7	87.2	86.8	86.3	85.8	85.4	84.9	84.5	84.0	83.5	83.1	<b>6</b>
<b>7</b>	90.0	89.5	89.1	88.6	88.2	87.7	87.3	86.8	86.3	85.9	85.4	85.0	84.5	84.1	83.6	83.2	<b>7</b>
<b>8</b>	90.0	89.5	89.1	88.6	88.2	87.7	87.3	86.8	86.4	85.9	85.5	85.0	84.6	84.2	83.7	83.3	<b>8</b>
<b>9</b>	90.0	89.6	89.1	88.7	88.2	87.8	87.3	86.9	86.4	86.0	85.6	85.1	84.7	84.2	83.8	83.4	<b>9</b>
<b>40</b>	90.0	89.6	89.1	88.7	88.2	87.8	87.4	86.9	86.5	86.1	85.6	85.2	84.7	84.3	83.9	83.4	<b>40</b>
<b>1</b>	90.0	89.6	89.1	88.7	88.3	87.8	87.4	87.0	86.5	86.1	85.7	85.3	84.8	84.4	84.0	83.5	<b>1</b>
<b>2</b>	90.0	89.6	89.1	88.7	88.3	87.9	87.4	87.0	86.6	86.2	85.7	85.3	84.9	84.5	84.1	83.6	<b>2</b>
<b>3</b>	90.0	89.6	89.2	88.7	88.3	87.9	87.5	87.1	86.7	86.2	85.8	85.4	85.0	84.6	84.2	83.7	<b>3</b>
<b>4</b>	90.0	89.6	89.2	88.8	88.4	87.9	87.5	87.1	86.7	86.3	85.9	85.5	85.1	84.7	84.2	83.8	<b>4</b>
<b>5</b>	90.0	89.6	89.2	88.8	88.4	88.0	87.6	87.2	86.8	86.4	86.0	85.6	85.1	84.7	84.3	83.9	<b>5</b>
<b>6</b>	90.0	89.6	89.2	88.8	88.4	88.0	87.6	87.2	86.8	86.4	86.0	85.6	85.1	84.7	84.3	83.9	<b>6</b>
<b>7</b>	90.0	89.6	89.2	88.8	88.4	88.0	87.7	87.3	86.9	86.5	86.1	85.7	85.3	84.9	84.5	84.2	<b>7</b>
<b>8</b>	90.0	89.6	89.2	88.8	88.5	88.1	87.7	87.3	86.9	86.6	86.2	85.8	85.4	85.0	84.6	84.3	<b>8</b>
<b>9</b>	90.0	89.6	89.2	88.9	88.5	88.1	87.7	87.4	87.0	86.6	86.2	85.9	85.5	85.1	84.8	84.4	<b>9</b>
<b>50</b>	90.0	89.6	89.3	88.9	88.5	88.2	87.8	87.4	87.1	86.7	86.3	86.0	85.6	85.2	84.9	84.5	<b>50</b>
<b>1</b>	90.0	89.6	89.3	88.9	88.6	88.2	87.8	87.5	87.1	86.8	86.4	86.0	85.7	85.3	85.0	84.6	<b>1</b>
<b>2</b>	90.0	89.6	89.3	88.9	88.6	88.2	87.9	87.5	87.2	86.8	86.5	86.1	85.8	85.4	85.1	84.7	<b>2</b>
<b>3</b>	90.0	89.7	89.3	89.0	88.6	88.3	87.9	87.6	87.2	86.9	86.6	86.2	85.9	85.5	85.2	84.8	<b>3</b>
<b>4</b>	90.0	89.7	89.3	89.0	88.7	88.3	88.0	87.6	87.3	87.0	86.6	86.3	86.0	85.6	85.3	85.0	<b>4</b>
<b>5</b>	90.0	89.7	89.3	89.0	88.7	88.4	88.0	87.7	87.4	87.0	86.7	86.4	86.1	85.7	85.4	85.1	<b>5</b>
<b>6</b>	90.0	89.7	89.4	89.0	88.7	88.4	88.1	87.8	87.4	87.1	86.8	86.5	86.2	85.8	85.5	85.2	<b>6</b>
<b>7</b>	90.0	89.7	89.4	89.1	88.8	88.4	88.1	87.8	87.5	87.2	86.9	86.6	86.3	86.0	85.6	85.3	<b>7</b>
<b>8</b>	90.0	89.7	89.4	89.1	88.8	88.5	88.2	87.9	87.6	87.3	87.0	86.7	86.4	86.1	85.8	85.5	<b>8</b>
<b>9</b>	90.0	89.7	89.4	89.1	88.8	88.5	88.2	87.9	87.6	87.3	87.1	86.8	86.5	86.2	85.9	85.6	<b>9</b>
<b>60</b>	90.0	89.7	89.4	89.1	88.9	88.6	88.3	88.0	87.7	87.4	87.1	86.9	86.6	86.3	86.0	85.7	<b>60</b>
<b>1</b>	90.0	89.7	89.4	89.2	88.9	88.6	88.3	88.1	87.8	87.5	87.2	86.9	86.7	86.4	86.1	85.8	<b>1</b>
<b>2</b>	90.0	89.7	89.5	89.2	88.9	88.7	88.4	88.1	87.8	87.6	87.3	87.0	86.8	86.5	86.2	86.0	<b>2</b>
<b>3</b>	90.0	89.7	89.5	89.2	89.0	88.7	88.4	88.2	87.9	87.7	87.4	87.1	86.9	86.6	86.4	86.1	<b>3</b>
<b>4</b>	90.0	89.7	89.5	89.2	89.0	88.7	88.5	88.2	88.0	87.7	87.5	87.2	87.0	86.7	86.5	86.2	<b>4</b>
<b>5</b>	90.0	89.8	89.5	89.3	89.0	88.8	88.5	88.3	88.1	87.8	87.6	87.3	87.1	86.9	86.6	86.4	<b>5</b>
<b>6</b>	90.0	89.8	89.5	89.3	89.1	88.8	88.6	88.4	88.1	87.9	87.7	87.4	87.2	87.0	86.7	86.5	<b>6</b>
<b>7</b>	90.0	89.8	89.6	89.3	89.1	88.9	88.7	88.4	88.2	88.0	87.8	87.5	87.3	87.1	86.9	86.6	<b>7</b>
<b>8</b>	90.0	89.8	89.6	89.4	89.1	88.9	88.7	88.5	88.3	88.1	87.9	87.6	87.4	87.2	87.0	86.8	<b>8</b>
<b>9</b>	90.0	89.8	89.6	89.4	89.2	89.0	88.8	88.6	88.4	88.2	87.9	87.7	87.5	87.3	87.1	86.9	<b>9</b>
<b>70</b>	90.0	89.8	89.6	89.4	89.2	89.0	88.8	88.6	88.4	88.2	88.0	87.8	87.6	87.5	87.3	87.1	<b>70</b>
LAT.	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h1 000° → 180° o azimute é dos quadrantes W  
Se h1 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**.15 → .30**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	.15	.16	.17	.18	.19	.20	.21	.22	.23	.24	.25	.26	.27	.28	.29		.30
<b>0°</b>	81.5	80.9	80.4	79.8	79.2	78.7	78.1	77.6	77.0	76.5	76.0	75.4	74.9	74.4	73.8	73.3	<b>0°</b>
<b>5</b>	81.5	80.9	80.4	79.8	79.3	78.7	78.2	77.6	77.1	76.6	76.0	75.5	74.9	74.4	73.9	73.4	<b>5</b>
<b>10</b>	81.6	81.0	80.5	79.9	79.4	78.9	78.3	77.8	77.2	76.7	76.2	75.6	75.1	74.6	74.1	73.5	<b>10</b>
<b>4</b>	81.7	81.2	80.6	80.1	79.6	79.0	78.5	78.0	77.4	76.9	76.4	75.8	75.3	74.8	74.3	73.8	<b>4</b>
<b>8</b>	81.9	81.3	80.8	80.3	79.8	79.2	78.7	78.2	77.7	77.1	76.6	76.1	75.6	75.1	74.6	74.1	<b>8</b>
<b>20</b>	82.0	81.4	80.9	80.4	79.9	79.4	78.8	78.3	77.8	77.3	76.8	76.3	75.8	75.3	74.8	74.3	<b>20</b>
<b>2</b>	82.1	81.6	81.0	80.5	80.0	79.5	79.0	78.5	78.0	77.5	76.9	76.4	75.9	75.4	75.0	74.5	<b>2</b>
<b>4</b>	82.2	81.7	81.2	80.7	80.2	79.6	79.1	78.6	78.1	77.6	77.1	76.6	76.1	75.7	75.2	74.7	<b>4</b>
<b>6</b>	82.3	81.8	81.3	80.8	80.3	79.8	79.3	78.8	78.3	77.8	77.3	76.8	76.4	75.9	75.4	74.9	<b>6</b>
<b>8</b>	82.5	82.0	81.5	81.0	80.5	80.0	79.5	79.0	78.5	78.0	77.6	77.1	76.6	76.1	75.6	75.2	<b>8</b>
<b>30</b>	82.6	82.1	81.6	81.1	80.7	80.2	79.7	79.2	78.7	78.3	77.8	77.3	76.8	76.4	76.9	75.4	<b>30</b>
<b>1</b>	82.7	82.2	81.7	81.2	80.7	80.3	79.8	79.3	78.8	78.4	77.9	77.4	77.0	76.5	76.0	75.6	<b>1</b>
<b>2</b>	82.8	82.3	81.8	81.3	80.8	80.4	79.9	79.4	79.0	78.5	78.0	77.6	77.1	76.6	76.2	75.7	<b>2</b>
<b>3</b>	82.8	82.4	81.9	81.4	80.9	80.5	80.0	79.5	79.1	78.6	78.2	77.7	77.2	76.8	76.3	75.9	<b>3</b>
<b>4</b>	82.9	82.4	82.0	81.5	81.0	80.6	80.1	79.7	79.2	78.7	78.3	77.8	77.4	76.9	76.5	76.0	<b>4</b>
<b>5</b>	83.0	82.5	82.1	81.6	81.2	80.7	80.2	79.8	79.3	78.9	78.4	78.0	77.5	77.1	76.6	76.2	<b>5</b>
<b>6</b>	83.1	82.6	82.2	81.7	81.3	80.8	80.4	79.9	79.5	79.0	78.6	78.1	77.7	77.2	76.8	76.4	<b>6</b>
<b>7</b>	83.2	82.7	82.3	81.8	81.4	80.9	80.5	80.0	79.6	79.1	78.7	78.3	77.8	77.4	77.0	76.5	<b>7</b>
<b>8</b>	83.3	82.8	82.4	81.9	81.5	81.0	80.6	80.2	79.7	79.3	78.9	78.4	78.0	77.6	77.1	76.7	<b>8</b>
<b>9</b>	83.4	82.9	82.5	82.0	81.6	81.2	80.7	80.3	79.9	79.4	79.0	78.6	78.1	77.7	77.3	76.9	<b>9</b>
<b>40</b>	83.4	83.0	82.6	82.1	81.7	81.3	80.9	80.4	80.0	79.6	79.2	78.7	78.3	77.9	77.5	77.1	<b>40</b>
<b>1</b>	83.5	83.1	82.7	82.3	81.8	81.4	81.0	80.6	80.2	79.7	79.3	78.9	78.5	78.1	77.7	77.2	<b>1</b>
<b>2</b>	83.6	83.2	82.8	82.4	82.0	81.5	81.1	80.7	80.3	79.9	79.5	79.1	78.7	78.2	77.8	77.4	<b>2</b>
<b>3</b>	83.7	83.3	82.9	82.5	82.1	81.7	81.3	80.9	80.5	80.0	79.6	79.2	78.8	78.4	78.0	77.6	<b>3</b>
<b>4</b>	83.8	83.4	83.0	82.6	82.2	81.8	81.4	81.0	80.6	80.2	79.8	79.4	79.0	78.6	78.2	77.8	<b>4</b>
<b>5</b>	83.9	83.5	83.1	82.7	82.3	82.0	81.6	81.2	80.8	80.4	80.0	79.6	79.2	78.8	78.4	78.0	<b>5</b>
<b>6</b>	84.1	83.7	83.3	82.9	82.5	82.1	81.7	81.3	80.9	80.5	80.1	79.8	79.4	79.0	78.6	78.2	<b>6</b>
<b>7</b>	84.2	83.8	83.4	83.0	82.6	82.2	81.8	81.5	81.1	80.7	80.3	79.9	79.6	79.2	78.8	78.4	<b>7</b>
<b>8</b>	84.3	83.9	83.5	83.1	82.8	82.4	82.0	81.6	81.3	80.9	80.5	80.1	79.8	79.4	79.0	78.6	<b>8</b>
<b>9</b>	84.4	84.0	83.6	83.3	82.9	82.5	82.2	81.8	81.4	81.1	80.7	80.3	80.0	79.6	79.2	78.9	<b>9</b>
<b>50</b>	84.5	84.1	83.8	83.4	83.0	82.7	82.3	82.0	81.6	81.2	80.9	80.5	80.2	79.8	79.4	79.1	<b>50</b>
<b>1</b>	84.6	84.3	83.9	83.5	83.2	82.8	82.5	82.1	81.8	81.4	81.1	80.7	80.4	80.0	79.7	79.3	<b>1</b>
<b>2</b>	84.7	84.4	84.0	83.7	83.3	83.0	82.6	82.3	81.9	81.6	81.2	80.9	80.6	80.2	79.9	79.5	<b>2</b>
<b>3</b>	84.8	84.5	84.2	83.8	83.5	83.1	82.8	82.5	82.1	81.8	81.4	81.1	80.8	80.4	80.1	79.8	<b>3</b>
<b>4</b>	85.0	84.6	84.3	84.0	83.6	83.3	83.0	82.6	82.3	82.0	81.6	81.3	81.0	80.7	80.3	80.0	<b>4</b>
<b>5</b>	85.1	84.8	84.4	84.1	83.8	83.5	83.1	82.8	82.5	82.2	81.8	81.5	81.2	80.9	80.6	80.2	<b>5</b>
<b>6</b>	85.2	84.9	84.6	84.3	83.9	83.6	83.3	83.0	82.7	82.4	82.0	81.7	81.4	81.1	80.8	80.5	<b>6</b>
<b>7</b>	85.3	85.0	84.7	84.4	84.1	83.8	83.5	83.2	82.9	82.6	82.2	81.9	81.6	81.3	81.0	80.7	<b>7</b>
<b>8</b>	85.5	85.2	84.9	84.6	84.3	84.0	83.7	83.4	83.1	82.8	82.5	82.2	81.9	81.6	81.3	81.0	<b>8</b>
<b>9</b>	85.6	85.3	85.0	84.7	84.4	84.1	83.8	83.5	83.2	83.0	82.7	82.4	82.1	81.8	81.5	81.2	<b>9</b>
<b>60</b>	85.7	85.4	85.1	84.9	84.6	84.3	84.0	83.7	83.4	83.2	82.9	82.6	82.3	82.0	81.7	81.5	<b>60</b>
<b>1</b>	85.8	85.6	85.3	85.0	84.7	84.5	84.2	83.9	83.6	83.4	83.1	82.8	82.5	82.3	82.0	81.7	<b>1</b>
<b>2</b>	86.0	85.7	85.4	85.2	84.9	84.6	84.4	84.1	83.8	83.6	83.3	83.0	82.8	82.5	82.2	82.0	<b>2</b>
<b>3</b>	86.1	85.8	85.6	85.3	85.1	84.8	84.6	84.3	84.0	83.8	83.5	83.3	83.0	82.8	82.5	82.2	<b>3</b>
<b>4</b>	86.2	86.0	85.7	85.5	85.2	85.0	84.7	84.5	84.2	84.0	83.7	83.5	83.2	83.0	82.8	82.5	<b>4</b>
<b>5</b>	86.4	86.1	85.9	85.6	85.4	85.2	84.9	84.7	84.4	84.2	84.0	83.7	83.5	83.3	83.0	82.8	<b>5</b>
<b>6</b>	86.5	86.3	86.0	85.8	85.6	85.3	85.1	84.9	84.7	84.4	84.2	84.0	83.7	83.5	83.3	83.0	<b>6</b>
<b>7</b>	86.6	86.4	86.2	86.0	85.8	85.5	85.3	85.1	84.9	84.6	84.4	84.2	84.0	83.8	83.5	83.3	<b>7</b>
<b>8</b>	86.8	86.6	86.4	86.1	85.9	85.7	85.5	85.3	85.1	84.9	84.6	84.4	84.2	84.0	83.8	83.6	<b>8</b>
<b>9</b>	86.9	86.7	86.5	86.3	86.1	85.9	85.7	85.5	85.3	85.1	84.9	84.7	84.5	84.3	84.1	83.9	<b>9</b>
<b>70</b>	87.1	86.9	86.7	86.5	86.3	86.1	85.9	85.7	85.5	85.3	85.1	84.9	84.7	84.5	84.3	84.1	<b>70</b>
LAT.	.15	.16	.17	.18	.19	.20	.21	.22	.23	.24	.25	.26	.27	.28	.29	.30	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h1 000° → 180° o azimute é dos quadrantes W  
Se h1 180° → 360° o azimute é dos quadrantes E

# TABELA 13.1

## TÁBUAS DE AZIMUTE

.30 → .45

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	.30	.31	.32	.33	.34	.35	.36	.37	.38	.39	.40	.41	.42	.43	.44		.45
0°	73.3	72.8	72.3	71.7	71.2	70.7	70.2	69.7	69.2	68.7	68.2	67.7	67.2	66.7	66.3	65.8	0°
5	73.4	72.8	72.3	71.8	71.3	70.8	70.3	69.8	69.3	68.8	68.3	67.8	67.3	66.8	66.3	65.9	5
10	73.5	73.0	72.5	72.0	71.5	71.0	70.5	70.0	69.5	69.0	68.5	68.0	67.5	67.0	66.6	66.1	10
4	73.8	73.3	72.8	72.2	71.7	71.2	70.7	70.3	69.8	69.3	68.8	68.3	67.8	67.4	66.9	66.4	4
8	74.1	73.6	73.1	72.6	72.1	71.6	71.1	70.6	70.1	69.6	69.2	68.7	68.2	67.8	67.3	66.8	8
20	74.3	73.8	73.3	72.8	72.3	71.8	71.3	70.8	70.3	69.9	69.4	68.9	68.5	68.0	67.5	67.1	20
2	74.6	74.0	73.5	73.0	72.5	72.0	71.5	71.1	70.6	70.1	69.7	69.2	68.7	68.3	67.8	67.4	2
4	74.7	74.2	73.7	73.2	72.7	72.3	71.8	71.3	70.9	70.4	69.9	69.5	69.0	68.6	68.1	67.7	4
6	74.9	74.4	74.0	73.5	73.0	72.5	72.1	71.6	71.1	70.7	70.2	69.8	69.3	68.9	68.4	68.0	6
8	75.2	74.7	74.2	73.8	73.3	72.8	72.4	71.9	71.5	71.0	70.5	70.1	69.7	69.2	68.8	68.3	8
30	75.4	75.0	74.5	74.1	73.6	73.1	72.7	72.2	71.8	71.3	70.9	70.5	70.0	69.6	69.1	68.7	30
1	75.6	75.1	74.7	74.2	73.8	73.3	72.9	72.4	72.0	71.5	71.1	70.6	70.2	69.8	69.3	68.9	1
2	75.7	75.3	74.8	74.4	73.9	73.5	73.0	72.6	72.1	71.7	71.3	70.8	70.4	70.0	69.5	69.1	2
3	75.9	75.4	75.0	74.5	74.1	73.6	73.2	72.8	72.3	71.9	71.5	71.0	70.6	70.2	69.7	69.3	3
4	76.0	75.6	75.1	74.7	74.3	73.8	73.4	72.9	72.5	72.1	71.7	71.2	70.8	70.4	70.0	69.5	4
5	76.2	75.8	75.3	74.9	74.4	74.0	73.6	73.1	72.7	72.3	71.9	71.4	71.0	70.6	70.2	69.8	5
6	76.4	75.9	75.5	75.1	74.6	74.2	73.8	73.3	72.9	72.5	72.1	71.6	71.2	70.8	70.4	70.0	6
7	76.5	76.1	75.7	75.2	74.8	74.4	74.0	73.5	73.1	72.7	72.3	71.9	71.5	71.0	70.6	70.2	7
8	76.7	76.3	75.8	75.4	75.0	74.6	74.2	73.7	73.3	72.9	72.5	72.1	71.7	71.3	70.9	70.5	8
9	76.9	76.5	76.0	75.6	75.2	74.8	74.4	74.0	73.5	73.1	72.7	72.3	71.9	71.5	71.1	70.7	9
40	77.1	76.6	76.2	75.8	75.4	75.0	74.6	74.2	73.8	73.4	73.0	72.6	72.2	71.8	71.4	71.0	40
1	77.2	76.8	76.4	76.0	75.6	75.2	74.8	74.4	74.0	73.6	73.2	72.8	72.4	72.0	71.6	71.2	1
2	77.4	77.0	76.6	76.2	75.8	75.4	75.0	74.6	74.2	73.8	73.4	73.1	72.7	72.3	71.9	71.5	2
3	77.6	77.2	76.8	76.4	76.0	75.6	75.2	74.9	74.5	74.1	73.7	73.3	72.9	72.5	72.2	71.8	3
4	77.8	77.4	77.0	76.6	76.3	75.9	75.5	75.1	74.7	74.3	73.9	73.6	73.2	72.8	72.4	72.1	4
5	78.0	77.6	77.3	76.9	76.5	76.1	75.7	75.3	75.0	74.6	74.2	73.8	73.5	73.1	72.7	72.3	5
6	78.2	77.8	77.5	77.1	76.7	76.3	76.0	75.6	75.2	74.8	74.5	74.1	73.7	73.4	73.0	72.6	6
7	78.4	78.1	77.7	77.3	76.9	76.6	76.2	75.8	75.5	75.1	74.7	74.4	74.0	73.7	73.3	72.9	7
8	78.6	78.3	77.9	77.5	77.2	76.8	76.5	76.1	75.7	75.4	75.0	74.7	74.3	73.9	73.6	73.2	8
9	78.9	78.5	78.1	77.8	77.4	77.1	76.7	76.4	76.0	75.6	75.3	74.9	74.6	74.2	73.9	73.6	9
50	79.1	78.7	78.4	78.0	77.7	77.3	77.0	76.6	76.3	75.9	75.6	75.2	74.9	74.5	74.2	73.9	50
1	79.3	79.0	78.6	78.3	77.9	77.6	77.2	76.9	76.6	76.2	75.9	75.5	75.2	74.9	74.5	74.2	1
2	79.5	79.2	78.9	78.5	78.2	77.8	77.5	77.2	76.8	76.5	76.2	75.8	75.5	75.2	74.8	74.5	2
3	79.8	79.4	79.1	78.8	78.4	78.1	77.8	77.4	77.1	76.8	76.5	76.1	75.8	75.5	75.2	74.8	3
4	80.0	79.7	79.3	79.0	78.7	78.4	78.1	77.7	77.4	77.1	76.8	76.5	76.1	75.8	75.5	75.2	4
5	80.2	79.9	79.6	79.3	79.0	78.6	78.3	78.0	77.7	77.4	77.1	76.8	76.5	76.1	75.8	75.5	5
6	80.5	80.2	79.9	79.5	79.2	78.9	78.6	78.3	78.0	77.7	77.4	77.1	76.8	76.5	76.2	75.9	6
7	80.7	80.4	80.1	79.8	79.5	79.2	78.9	78.6	78.3	78.0	77.7	77.4	77.1	76.8	76.5	76.2	7
8	81.0	80.7	80.4	80.1	79.8	79.5	79.2	78.9	78.6	78.3	78.0	77.7	77.5	77.2	76.9	76.6	8
9	81.2	80.9	80.6	80.4	80.1	79.8	79.5	79.2	78.9	78.6	78.4	78.1	77.8	77.5	77.2	77.0	9
60	81.5	81.2	80.9	80.6	80.4	80.1	79.8	79.5	79.2	79.0	78.7	78.4	78.1	77.9	77.6	77.3	60
1	81.7	81.5	81.2	80.9	80.6	80.4	80.1	79.8	79.6	79.3	79.0	78.8	78.5	78.2	78.0	77.7	1
2	82.0	81.7	81.5	81.2	80.9	80.7	80.4	80.1	79.9	79.6	79.4	79.1	78.8	78.6	78.3	78.1	2
3	82.2	82.0	81.7	81.5	81.2	81.0	80.7	80.5	80.2	80.0	79.7	79.5	79.2	79.0	78.7	78.5	3
4	82.5	82.3	82.0	81.8	81.5	81.3	81.0	80.8	80.5	80.3	80.1	79.8	79.6	79.3	79.1	78.8	4
5	82.8	82.5	82.3	82.1	81.8	81.6	81.3	81.1	80.9	80.6	80.4	80.2	79.9	79.7	79.5	79.2	5
6	83.0	82.8	82.6	82.4	82.1	81.9	81.7	81.4	81.2	81.0	80.8	80.5	80.3	80.1	79.9	79.6	6
7	83.3	83.1	82.9	82.7	82.4	82.2	82.0	81.8	81.6	81.3	81.1	80.9	80.7	80.5	80.2	80.0	7
8	83.6	83.4	83.2	83.0	82.7	82.5	82.3	82.1	81.9	81.7	81.5	81.3	81.1	80.8	80.6	80.4	8
9	83.9	83.7	83.5	83.3	83.1	82.9	82.6	82.4	82.2	82.0	81.8	81.6	81.4	81.2	81.0	80.8	9
70	84.1	83.9	83.8	83.6	83.4	83.2	83.0	82.8	82.6	82.4	82.2	82.0	81.8	81.6	81.4	81.3	70
LAT.	.30	.31	.32	.33	.34	.35	.36	.37	.38	.39	.40	.41	.42	.43	.44	.45	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
 Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
 Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**.45 → .60**

LAT. (OU LATITUDE DE PARTIDA)	C																LAT. (OU LATITUDE DE PARTIDA)
	.45	.46	.47	.48	.49	.50	.51	.52	.53	.54	.55	.56	.57	.58	.59	.60	
<b>0</b>	65.8	65.3	64.8	64.4	63.9	63.4	63.0	62.5	62.1	61.6	61.2	60.8	60.3	59.9	59.5	59.0	<b>0</b>
<b>5</b>	65.9	65.4	64.9	64.4	64.0	63.5	63.1	62.6	62.2	61.7	61.3	60.8	60.4	60.0	59.6	59.1	<b>5</b>
<b>10</b>	66.1	65.6	65.2	64.7	64.2	63.8	63.3	62.9	62.4	62.0	61.6	61.1	60.7	60.3	59.8	59.4	<b>10</b>
<b>4</b>	66.4	65.9	65.5	65.0	64.6	64.1	63.7	63.2	62.8	62.3	61.9	61.5	61.1	60.6	60.2	59.8	<b>4</b>
<b>8</b>	66.8	66.4	65.9	65.5	65.0	64.6	64.1	63.7	63.2	62.8	62.4	62.0	61.5	61.1	60.7	60.3	<b>8</b>
<b>20</b>	67.1	66.6	66.2	65.7	65.3	64.8	64.4	64.0	63.5	63.1	62.7	62.2	61.8	61.4	61.0	60.6	<b>20</b>
<b>2</b>	67.4	66.9	66.5	66.0	65.6	65.1	64.7	64.3	63.8	63.4	63.0	62.6	62.1	61.7	61.3	60.9	<b>2</b>
<b>4</b>	67.7	67.2	66.8	66.3	65.9	65.5	65.0	64.6	64.2	63.7	63.3	62.9	62.5	62.1	61.7	61.3	<b>4</b>
<b>6</b>	68.0	67.5	67.1	66.7	66.2	65.8	65.4	64.9	64.5	64.1	63.7	63.3	62.9	62.5	62.1	61.7	<b>6</b>
<b>8</b>	68.3	67.9	67.5	67.0	66.6	66.2	65.8	65.3	64.9	64.5	64.1	63.7	63.3	62.9	62.5	62.1	<b>8</b>
<b>30</b>	68.7	68.3	67.9	67.4	67.0	66.6	66.2	65.8	65.3	64.9	64.5	64.1	63.7	63.3	62.9	62.5	<b>30</b>
<b>1</b>	68.9	68.5	68.1	67.6	67.2	66.8	66.4	66.0	65.6	65.2	64.8	64.4	64.0	63.6	63.2	62.8	<b>1</b>
<b>2</b>	69.1	68.7	68.3	67.9	67.4	67.0	66.6	66.2	65.8	65.4	65.0	64.6	64.2	63.8	63.4	63.0	<b>2</b>
<b>3</b>	69.3	68.9	68.5	68.1	67.7	67.2	66.8	66.4	66.0	65.6	65.2	64.8	64.4	64.0	63.6	63.2	<b>3</b>
<b>4</b>	69.5	69.1	68.7	68.3	67.9	67.5	67.1	66.7	66.3	65.9	65.5	65.1	64.7	64.3	63.9	63.5	<b>4</b>
<b>5</b>	69.8	69.4	68.9	68.5	68.1	67.7	67.3	66.9	66.5	66.1	65.7	65.4	65.0	64.6	64.2	63.8	<b>5</b>
<b>6</b>	70.0	69.6	69.2	68.8	68.4	68.0	67.6	67.2	66.8	66.4	66.0	65.6	65.2	64.9	64.5	64.1	<b>6</b>
<b>7</b>	70.2	69.8	69.4	69.0	68.6	68.2	67.8	67.4	67.1	66.7	66.3	65.9	65.5	65.1	64.8	64.4	<b>7</b>
<b>8</b>	70.5	70.1	69.7	69.3	68.9	68.5	68.1	67.7	67.3	66.9	66.6	66.2	65.8	65.4	65.1	64.7	<b>8</b>
<b>9</b>	70.7	70.3	69.9	69.5	69.2	68.8	68.4	68.0	67.6	67.2	66.9	66.5	66.1	65.7	65.4	65.0	<b>9</b>
<b>40</b>	71.0	70.6	70.2	69.8	69.4	69.0	68.7	68.3	67.9	67.5	67.2	66.8	66.4	66.0	65.7	65.3	<b>40</b>
<b>1</b>	71.2	70.9	70.5	70.1	69.7	69.3	68.9	68.6	68.2	67.8	67.5	67.1	66.7	66.4	66.0	65.6	<b>1</b>
<b>2</b>	71.5	71.1	70.7	70.4	70.0	69.6	69.2	68.9	68.5	68.1	67.8	67.4	67.0	66.7	66.3	66.0	<b>2</b>
<b>3</b>	71.8	71.4	71.0	70.7	70.3	69.9	69.5	69.2	68.8	68.4	68.1	67.7	67.4	67.0	66.7	66.3	<b>3</b>
<b>4</b>	72.1	71.7	71.3	71.0	70.6	70.2	69.9	69.5	69.1	68.8	68.4	68.1	67.7	67.4	67.0	66.7	<b>4</b>
<b>5</b>	72.3	72.0	71.6	71.3	70.9	70.5	70.2	69.8	69.5	69.1	68.7	68.4	68.0	67.7	67.4	67.0	<b>5</b>
<b>6</b>	72.6	72.3	71.9	71.6	71.2	70.8	70.5	70.1	69.8	69.4	69.1	68.7	68.4	68.1	67.7	67.4	<b>6</b>
<b>7</b>	72.9	72.6	72.2	71.9	71.5	71.2	70.8	70.5	70.1	69.8	69.4	69.1	68.8	68.4	68.1	67.7	<b>7</b>
<b>8</b>	73.2	72.9	72.5	72.2	71.8	71.5	71.2	70.8	70.5	70.1	69.8	69.5	69.1	68.8	68.5	68.1	<b>8</b>
<b>9</b>	73.6	73.2	72.9	72.5	72.2	71.8	71.5	71.2	70.8	70.5	70.2	69.8	69.5	69.2	68.8	68.5	<b>9</b>
<b>50</b>	73.9	73.5	73.2	72.9	72.5	72.2	71.8	71.5	71.2	70.9	70.5	70.2	69.9	69.6	69.2	68.9	<b>50</b>
<b>1</b>	74.2	73.9	73.5	73.2	72.9	72.6	72.2	71.9	71.6	71.2	70.9	70.6	70.3	69.9	69.6	69.3	<b>1</b>
<b>2</b>	74.5	74.2	73.9	73.5	73.2	72.9	72.6	72.2	71.9	71.6	71.3	71.0	70.7	70.3	70.0	69.7	<b>2</b>
<b>3</b>	74.8	74.5	74.2	73.9	73.6	73.3	72.9	72.6	72.3	72.0	71.7	71.4	71.1	70.8	70.5	70.1	<b>3</b>
<b>4</b>	75.2	74.9	74.6	74.2	73.9	73.6	73.3	73.0	72.7	72.4	72.1	71.8	71.5	71.2	70.9	70.6	<b>4</b>
<b>5</b>	75.5	75.2	74.9	74.6	74.3	74.0	73.7	73.4	73.1	72.8	72.5	72.2	71.9	71.6	71.3	71.0	<b>5</b>
<b>6</b>	75.9	75.6	75.3	75.0	74.7	74.4	74.1	73.8	73.5	73.2	72.9	72.6	72.3	72.0	71.7	71.5	<b>6</b>
<b>7</b>	76.2	75.9	75.6	75.3	75.1	74.8	74.5	74.2	73.9	73.6	73.3	73.0	72.8	72.5	72.2	71.9	<b>7</b>
<b>8</b>	76.6	76.3	76.0	75.7	75.4	75.2	74.9	74.6	74.3	74.0	73.8	73.5	73.2	72.9	72.6	72.4	<b>8</b>
<b>9</b>	77.0	76.7	76.4	76.1	75.8	75.6	75.3	75.0	74.7	74.5	74.2	73.9	73.6	73.4	73.1	72.8	<b>9</b>
<b>60</b>	77.3	77.0	76.8	76.5	76.2	76.0	75.7	75.4	75.2	74.9	74.6	74.4	74.1	73.8	73.6	73.3	<b>60</b>
<b>1</b>	77.7	77.4	77.2	76.9	76.6	76.4	76.1	75.9	75.6	75.3	75.1	74.8	74.6	74.3	74.0	73.8	<b>1</b>
<b>2</b>	78.1	77.8	77.6	77.3	77.0	76.8	76.5	76.3	76.0	75.8	75.5	75.3	75.0	74.8	74.5	74.3	<b>2</b>
<b>3</b>	78.5	78.2	78.0	77.7	77.5	77.2	77.0	76.7	76.5	76.2	76.0	75.7	75.5	75.2	75.0	74.8	<b>3</b>
<b>4</b>	78.8	78.6	78.4	78.1	77.9	77.6	77.4	77.2	76.9	76.7	76.4	76.2	76.0	75.7	75.5	75.3	<b>4</b>
<b>5</b>	79.2	79.0	78.8	78.5	78.3	78.1	77.8	77.6	77.4	77.1	76.9	76.7	76.5	76.2	76.0	75.8	<b>5</b>
<b>6</b>	79.6	79.4	79.2	79.0	78.7	78.5	78.3	78.1	77.8	77.6	77.4	77.2	76.9	76.7	76.5	76.3	<b>6</b>
<b>7</b>	80.0	79.8	79.6	79.4	79.2	78.9	78.7	78.5	78.3	78.1	77.9	77.7	77.4	77.2	77.0	76.8	<b>7</b>
<b>8</b>	80.4	80.2	80.0	79.8	79.6	79.4	79.2	79.0	78.8	78.6	78.4	78.2	77.9	77.7	77.5	77.3	<b>8</b>
<b>9</b>	80.8	80.6	80.4	80.2	80.0	79.8	79.6	79.4	79.2	79.0	78.8	78.7	78.5	78.3	78.1	77.9	<b>9</b>
<b>70</b>	81.3	81.1	80.9	80.7	80.5	80.3	80.1	79.9	79.7	79.5	79.3	79.2	79.0	78.8	78.6	78.4	<b>70</b>
LAT.	.45	.46	.47	.48	.49	.50	.51	.52	.53	.54	.55	.56	.57	.58	.59	.60	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h1 000° → 180° o azimute é dos quadrantes W  
Se h1 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

.60 → .75

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	.60	.61	.62	.63	.64	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74		.75
0°	59.0	58.6	58.2	57.8	57.4	57.0	56.6	56.2	55.8	55.4	55.0	54.6	54.2	53.9	53.5	53.1	0°
5	59.1	58.7	58.3	57.9	57.5	57.1	56.7	56.3	55.9	55.5	55.1	54.7	54.3	54.0	53.6	53.2	5
10	59.4	59.0	58.6	58.2	57.8	57.4	57.0	56.6	56.2	55.8	55.4	55.0	54.7	54.3	53.9	53.6	10
4	59.8	59.4	59.0	58.6	58.2	57.8	57.4	57.0	56.6	56.2	55.8	55.4	55.1	54.7	54.3	54.0	4
8	60.3	59.9	59.5	59.1	58.7	58.3	57.9	57.5	57.1	56.7	56.3	56.0	55.6	55.2	54.9	54.5	8
20	60.6	60.2	59.8	59.4	59.0	58.6	58.2	57.8	57.4	57.0	56.7	56.3	55.9	55.6	55.2	54.8	20
2	60.9	60.5	60.1	59.7	59.3	58.9	58.5	58.2	57.8	57.4	57.0	56.6	56.3	55.9	55.5	55.2	2
4	61.3	60.9	60.5	60.1	59.7	59.3	58.9	58.5	58.2	57.8	57.4	57.0	56.7	56.3	55.9	55.6	4
6	61.7	61.3	60.9	60.5	60.1	59.7	59.3	58.9	58.6	58.2	57.8	57.5	57.1	56.7	56.4	56.0	6
8	62.1	61.7	61.3	60.9	60.5	60.1	59.8	59.4	59.0	58.6	58.3	57.9	57.6	57.2	56.8	56.5	8
30	62.5	62.2	61.8	61.4	61.0	60.6	60.2	59.9	59.5	59.1	58.8	58.4	58.1	57.7	57.3	57.0	30
1	62.8	62.4	62.0	61.6	61.3	60.9	60.5	60.1	59.8	59.4	59.0	58.7	58.3	58.0	57.6	57.3	1
2	63.0	62.6	62.3	61.9	61.5	61.1	60.8	60.4	60.0	59.7	59.3	58.9	58.6	58.2	57.9	57.5	2
3	63.3	62.9	62.5	62.1	61.8	61.4	61.0	60.7	60.3	59.9	59.6	59.2	58.9	58.5	58.2	57.8	3
4	63.6	63.2	62.8	62.4	62.1	61.7	61.3	60.9	60.6	60.2	59.9	59.5	59.2	58.8	58.5	58.1	4
5	63.8	63.4	63.1	62.7	62.3	62.0	61.6	61.2	60.9	60.5	60.2	59.8	59.5	59.1	58.8	58.4	5
6	64.1	63.7	63.4	63.0	62.6	62.3	61.9	61.5	61.2	60.8	60.5	60.1	59.8	59.4	59.1	58.8	6
7	64.4	64.0	63.7	63.3	62.9	62.6	62.2	61.8	61.5	61.1	60.8	60.4	60.1	59.8	59.4	59.1	7
8	64.7	64.3	64.0	63.6	63.2	62.9	62.5	62.2	61.8	61.5	61.1	60.8	60.4	60.1	59.8	59.4	8
9	65.0	64.6	64.3	63.9	63.6	63.2	62.8	62.5	62.1	61.8	61.5	61.1	60.8	60.4	60.1	59.8	9
40	65.3	65.0	64.6	64.2	63.9	63.5	63.2	62.8	62.5	62.1	61.8	61.5	61.1	60.8	60.5	60.1	40
1	65.6	65.3	64.9	64.6	64.2	63.9	63.5	63.2	62.8	62.5	62.2	61.8	61.5	61.1	60.8	60.5	1
2	66.0	65.6	65.3	64.9	64.6	64.2	63.9	63.5	63.2	62.9	62.5	62.2	61.9	61.5	61.2	60.9	2
3	66.3	66.0	65.6	65.3	64.9	64.6	64.2	63.9	63.6	63.2	62.9	62.6	62.2	61.9	61.6	61.3	3
4	66.7	66.3	66.0	65.6	65.3	64.9	64.6	64.3	63.9	63.6	63.3	62.9	62.6	62.3	62.0	61.7	4
5	67.0	66.7	66.3	66.0	65.7	65.3	65.0	64.7	64.3	64.0	63.7	63.3	63.0	62.7	62.4	62.1	5
6	67.4	67.0	66.7	66.4	66.0	65.7	65.4	65.0	64.7	64.4	64.1	63.7	63.4	63.1	62.8	62.5	6
7	67.7	67.4	67.1	66.7	66.4	66.1	65.8	65.4	65.1	64.8	64.5	64.2	63.8	63.5	63.2	62.9	7
8	68.1	67.8	67.5	67.1	66.8	66.5	66.2	65.9	65.5	65.2	64.9	64.6	64.3	64.0	63.7	63.4	8
9	68.5	68.2	67.9	67.5	67.2	66.9	66.6	66.3	66.0	65.6	65.3	65.0	64.7	64.4	64.1	63.8	9
50	68.9	68.6	68.3	68.0	67.6	67.3	67.0	66.7	66.4	66.1	65.8	65.5	65.2	64.9	64.6	64.3	50
1	69.3	69.0	68.7	68.4	68.1	67.8	67.4	67.1	66.8	66.5	66.2	65.9	65.6	65.3	65.0	64.7	1
2	69.7	69.4	69.1	68.8	68.5	68.2	67.9	67.6	67.3	67.0	66.7	66.4	66.1	65.8	65.5	65.2	2
3	70.1	69.8	69.5	69.2	68.9	68.6	68.3	68.0	67.7	67.4	67.2	66.9	66.6	66.3	66.0	65.7	3
4	70.6	70.3	70.0	69.7	69.4	69.1	68.8	68.5	68.2	67.9	67.6	67.3	67.1	66.8	66.5	66.2	4
5	71.0	70.7	70.4	70.1	69.8	69.6	69.3	69.0	68.7	68.4	68.1	67.8	67.6	67.3	67.0	66.7	5
6	71.5	71.2	70.9	70.6	70.3	70.0	69.7	69.5	69.2	68.9	68.6	68.3	68.1	67.8	67.5	67.2	6
7	71.9	71.6	71.3	71.1	70.8	70.5	70.2	70.0	69.7	69.4	69.1	68.9	68.6	68.3	68.0	67.8	7
8	72.4	72.1	71.8	71.5	71.3	71.0	70.7	70.5	70.2	69.9	69.6	69.4	69.1	68.9	68.6	68.3	8
9	72.8	72.6	72.3	72.0	71.8	71.5	71.2	71.0	70.7	70.4	70.2	69.9	69.7	69.4	69.1	68.9	9
60	73.3	73.0	72.8	72.5	72.3	72.0	71.7	71.5	71.2	71.0	70.7	70.5	70.2	69.9	69.7	69.4	60
1	73.8	73.5	73.3	73.0	72.8	72.5	72.3	72.0	71.8	71.5	71.3	71.0	70.8	70.5	70.3	70.0	1
2	74.3	74.0	73.8	73.5	73.3	73.0	72.8	72.5	72.3	72.1	71.8	71.6	71.3	71.1	70.8	70.6	2
3	74.8	74.5	74.3	74.0	73.8	73.6	73.3	73.1	72.8	72.6	72.4	72.1	71.9	71.7	71.4	71.2	3
4	75.3	75.0	74.8	74.6	74.3	74.1	73.9	73.6	73.4	73.2	72.9	72.7	72.5	72.3	72.0	71.8	4
5	75.8	75.5	75.3	75.1	74.9	74.6	74.4	74.2	74.0	73.7	73.5	73.3	73.1	72.9	72.6	72.4	5
6	76.3	76.1	75.8	75.6	75.4	75.2	75.0	74.8	74.5	74.3	74.1	73.9	73.7	73.5	73.2	73.0	6
7	76.8	76.6	76.4	76.2	76.0	75.7	75.5	75.3	75.1	74.9	74.7	74.5	74.3	74.1	73.9	73.7	7
8	77.3	77.1	76.9	76.7	76.5	76.3	76.1	75.9	75.7	75.5	75.3	75.1	74.9	74.7	74.5	74.3	8
9	77.9	77.7	77.5	77.3	77.1	76.9	76.7	76.5	76.3	76.1	75.9	75.7	75.5	75.3	75.1	75.0	9
70	78.4	78.2	78.0	77.8	77.7	77.5	77.3	77.1	76.9	76.7	76.5	76.4	76.2	76.0	75.8	75.6	70
LAT.	.60	.61	.62	.63	.64	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**.75 → 1.00**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	.75	.76	.77	.78	.79	.80	.82	.84	.86	.88	.90	.92	.94	.96	.98		1.00
<b>0°</b>	53.1	52.8	52.4	52.0	51.7	51.3	50.6	50.0	49.3	48.7	48.0	47.4	46.8	46.2	45.6	45.0	<b>0°</b>
<b>5</b>	53.2	52.9	52.5	52.2	51.8	51.4	50.8	50.1	49.4	48.8	48.1	47.5	46.9	46.3	45.7	45.1	<b>5</b>
<b>10</b>	53.6	53.2	52.8	52.5	52.1	51.8	51.1	50.4	49.7	49.1	48.4	47.8	47.2	46.6	46.0	45.4	<b>10</b>
<b>4</b>	54.0	53.6	53.2	52.9	52.5	52.2	51.5	50.8	50.2	49.5	48.9	48.2	47.6	47.0	46.4	45.9	<b>4</b>
<b>8</b>	54.5	54.1	53.8	53.4	53.1	52.7	52.1	51.4	50.7	50.1	49.4	48.8	48.2	47.6	47.0	46.4	<b>8</b>
<b>20</b>	54.8	54.5	54.1	53.8	53.4	53.1	52.4	51.7	51.1	50.4	49.8	49.2	48.5	47.9	47.4	46.8	<b>20</b>
<b>2</b>	55.2	54.8	54.5	54.1	53.8	53.4	52.8	52.1	51.4	50.8	50.2	49.5	48.9	48.3	47.7	47.2	<b>2</b>
<b>4</b>	55.6	55.2	54.9	54.5	54.2	53.8	53.2	52.5	51.8	51.2	50.6	50.0	49.3	48.7	48.2	47.6	<b>4</b>
<b>6</b>	56.0	55.7	55.3	55.0	54.6	54.3	53.6	52.9	52.3	51.7	51.0	50.4	49.8	49.2	48.6	48.1	<b>6</b>
<b>8</b>	56.5	56.1	55.8	55.4	55.1	54.8	54.1	53.4	52.8	52.2	51.5	50.9	50.3	49.7	49.1	48.6	<b>8</b>
<b>30</b>	57.0	56.6	56.3	56.0	55.6	55.3	54.6	54.0	53.3	52.7	52.1	51.5	50.9	50.3	49.7	49.1	<b>30</b>
<b>1</b>	57.3	56.9	56.6	56.2	55.9	55.6	54.9	54.2	53.6	53.0	52.4	51.7	51.1	50.5	50.0	49.4	<b>1</b>
<b>2</b>	57.5	57.2	56.9	56.5	56.2	55.8	55.2	54.5	53.9	53.3	52.6	52.0	51.4	50.9	50.3	49.7	<b>2</b>
<b>3</b>	57.8	57.5	57.1	56.8	56.5	56.1	55.5	54.8	54.2	53.6	53.0	52.3	51.7	51.2	50.6	50.0	<b>3</b>
<b>4</b>	58.1	57.8	57.4	57.1	56.8	56.4	55.8	55.1	54.5	53.9	53.3	52.7	52.1	51.5	50.9	50.3	<b>4</b>
<b>5</b>	58.4	58.1	57.8	57.4	57.1	56.8	56.1	55.5	54.8	54.2	53.6	53.0	52.4	51.8	51.2	50.7	<b>5</b>
<b>6</b>	58.8	58.4	58.1	57.7	57.4	57.1	56.4	55.8	55.2	54.6	53.9	53.3	52.7	52.2	51.6	51.0	<b>6</b>
<b>7</b>	59.1	58.7	58.4	58.1	57.8	57.4	56.8	56.1	55.5	54.9	54.3	53.7	53.1	52.5	52.0	51.4	<b>7</b>
<b>8</b>	59.4	59.1	58.8	58.4	58.1	57.8	57.1	56.5	55.9	55.3	54.7	54.1	53.5	52.9	52.3	51.8	<b>8</b>
<b>9</b>	59.8	59.4	59.1	58.8	58.5	58.1	57.5	56.9	56.2	55.6	55.0	54.4	53.9	53.3	52.7	52.1	<b>9</b>
<b>40</b>	60.1	59.8	59.5	59.1	58.8	58.5	57.9	57.2	56.6	56.0	55.4	54.8	54.2	53.7	53.1	52.5	<b>40</b>
<b>1</b>	60.5	60.2	59.8	59.5	59.2	58.9	58.2	57.6	57.0	56.4	55.8	55.2	54.6	54.1	53.5	53.0	<b>1</b>
<b>2</b>	60.9	60.5	60.2	59.9	59.6	59.3	58.6	58.0	57.4	56.8	56.2	55.6	55.1	54.5	53.9	53.4	<b>2</b>
<b>3</b>	61.3	60.9	60.6	60.3	60.0	59.7	59.0	58.4	57.8	57.2	56.6	56.1	55.5	54.9	54.4	53.8	<b>3</b>
<b>4</b>	61.7	61.3	61.0	60.7	60.4	60.1	59.5	58.9	58.3	57.7	57.1	56.5	55.9	55.4	54.8	54.3	<b>4</b>
<b>5</b>	62.1	61.7	61.4	61.1	60.8	60.5	59.9	59.3	58.7	58.1	57.5	57.0	56.4	55.8	55.3	54.7	<b>5</b>
<b>6</b>	62.5	62.2	61.9	61.6	61.2	60.9	60.3	59.7	59.1	58.6	58.0	57.4	56.9	56.3	55.8	55.2	<b>6</b>
<b>7</b>	62.9	62.6	62.3	62.0	61.7	61.4	60.8	60.2	59.6	59.0	58.5	57.9	57.3	56.8	56.2	55.7	<b>7</b>
<b>8</b>	63.4	63.0	62.7	62.4	62.1	61.8	61.2	60.7	60.1	59.5	58.9	58.4	57.8	57.3	56.7	56.2	<b>8</b>
<b>9</b>	63.8	63.5	63.2	62.9	62.6	62.3	61.7	61.1	60.6	60.0	59.4	58.9	58.3	57.8	57.3	56.7	<b>9</b>
<b>50</b>	64.3	64.0	63.7	63.4	63.1	62.8	62.2	61.6	61.1	60.5	60.0	59.4	58.9	58.3	57.8	57.3	<b>50</b>
<b>1</b>	64.7	64.4	64.1	63.9	63.6	63.3	62.7	62.1	61.6	61.0	60.5	59.9	59.4	58.9	58.3	57.8	<b>1</b>
<b>2</b>	65.2	64.9	64.6	64.3	64.1	63.8	63.2	62.7	62.1	61.6	61.0	60.5	59.9	59.4	58.9	58.4	<b>2</b>
<b>3</b>	65.7	65.4	65.1	64.9	64.6	64.3	63.7	63.2	62.6	62.1	61.6	61.0	60.5	60.0	59.5	59.0	<b>3</b>
<b>4</b>	66.2	65.9	65.6	65.4	65.1	64.8	64.3	63.7	63.2	62.6	62.1	61.6	61.1	60.6	60.1	59.6	<b>4</b>
<b>5</b>	66.7	66.4	66.2	65.9	65.6	65.4	64.8	64.3	63.7	63.2	62.7	62.2	61.7	61.2	60.7	60.2	<b>5</b>
<b>6</b>	67.2	67.0	66.7	66.4	66.2	65.9	65.4	64.8	64.3	63.8	63.3	62.8	62.3	61.8	61.3	60.8	<b>6</b>
<b>7</b>	67.8	67.5	67.2	67.0	66.7	66.5	65.9	65.4	64.9	64.4	63.9	63.4	62.9	62.4	61.9	61.4	<b>7</b>
<b>8</b>	68.3	68.1	67.8	67.5	67.3	67.0	66.5	66.0	65.5	65.0	64.5	64.0	63.5	63.0	62.6	62.1	<b>8</b>
<b>9</b>	68.9	68.6	68.4	68.1	67.9	67.6	67.1	66.6	66.1	65.6	65.1	64.6	64.2	63.7	63.2	62.7	<b>9</b>
<b>60</b>	69.4	69.2	68.9	68.7	68.4	68.2	67.7	67.2	66.7	66.3	65.8	65.3	64.8	64.4	63.9	63.4	<b>60</b>
<b>1</b>	70.0	69.8	69.5	69.3	69.0	68.8	68.3	67.8	67.4	66.9	66.4	66.0	65.5	65.0	64.6	64.1	<b>1</b>
<b>2</b>	70.6	70.4	70.1	69.9	69.7	69.4	68.9	68.5	68.0	67.6	67.1	66.6	66.2	65.7	65.3	64.9	<b>2</b>
<b>3</b>	71.2	71.0	70.7	70.5	70.3	70.0	69.6	69.1	68.7	68.2	67.8	67.3	66.9	66.5	66.0	65.6	<b>3</b>
<b>4</b>	71.8	71.6	71.3	71.1	70.9	70.7	70.2	69.8	69.3	68.9	68.5	68.0	67.6	67.2	66.8	66.3	<b>4</b>
<b>5</b>	72.4	72.2	72.0	71.8	71.5	71.3	70.9	70.5	70.0	69.6	69.2	68.8	68.3	67.9	67.5	67.1	<b>5</b>
<b>6</b>	73.0	72.8	72.6	72.4	72.2	72.0	71.6	71.1	70.7	70.3	69.9	69.5	69.1	68.7	68.3	67.9	<b>6</b>
<b>7</b>	73.7	73.5	73.3	73.1	72.8	72.6	72.2	71.8	71.4	71.0	70.6	70.2	69.8	69.4	69.0	68.7	<b>7</b>
<b>8</b>	74.3	74.1	73.9	73.7	73.5	73.3	72.9	72.5	72.1	71.8	71.4	71.0	70.6	70.2	69.8	69.5	<b>8</b>
<b>9</b>	75.0	74.8	74.6	74.4	74.2	74.0	73.6	73.2	72.9	72.5	72.1	71.8	71.4	71.0	70.6	70.3	<b>9</b>
<b>70</b>	75.6	75.4	75.2	75.1	74.9	74.7	74.3	74.0	73.6	73.2	72.9	72.5	72.2	71.8	71.5	71.1	<b>70</b>

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h| 000° → 180° o azimute é dos quadrantes W  
Se h| 180° → 360° o azimute é dos quadrantes E

# TABELA 13.1

## TÁBUAS DE AZIMUTE

1.00 → 1.30

LAT. (OU LATITUDE DE PARTIDA)	c															LAT. (OU LATITUDE DE PARTIDA)	
	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24	1.26	1.28		1.30
0°	45.0	44.4	43.9	43.3	42.8	42.3	41.8	41.3	40.8	40.3	39.8	39.3	38.9	38.4	38.0	37.6	0°
5	45.1	44.5	44.0	43.4	42.9	42.4	41.9	41.4	40.9	40.4	39.9	39.4	39.0	38.5	38.1	37.7	5
10	45.4	44.9	44.3	43.8	43.2	42.7	42.2	41.7	41.2	40.7	40.2	39.8	39.3	38.9	38.4	38.0	10
4	45.9	45.3	44.7	44.2	43.7	43.1	42.6	42.1	41.6	41.1	40.7	40.2	39.7	39.3	38.8	38.4	4
8	46.4	45.9	45.3	44.8	44.2	43.7	43.2	42.7	42.2	41.7	41.2	40.8	40.3	39.8	39.4	39.0	8
20	46.8	46.2	45.7	45.1	44.6	44.1	43.5	43.0	42.5	42.0	41.6	41.1	40.6	40.2	39.7	39.3	20
2	47.2	46.6	46.0	45.5	45.0	44.4	43.9	43.4	42.9	42.4	41.9	41.5	41.0	40.6	40.1	39.7	2
4	47.6	47.0	46.5	45.9	45.4	44.9	44.3	43.8	43.3	42.9	42.4	41.9	41.4	41.0	40.5	40.1	4
6	48.1	47.5	46.9	46.4	45.9	45.3	44.8	44.3	43.8	43.3	42.8	42.4	41.9	41.4	41.0	40.6	6
8	48.6	48.0	47.4	46.9	46.4	45.8	45.3	44.8	44.3	43.8	43.3	42.9	42.4	42.0	41.5	41.1	8
30	49.1	48.5	48.0	47.4	46.9	46.4	45.9	45.4	44.9	44.4	43.9	43.4	43.0	42.5	42.1	41.6	30
1	49.4	48.8	48.3	47.7	47.2	46.7	46.2	45.7	45.2	44.7	44.2	43.7	43.3	42.8	42.3	41.9	1
2	49.7	49.1	48.6	48.0	47.5	47.0	46.5	46.0	45.5	45.0	44.5	44.0	43.6	43.1	42.7	42.2	2
3	50.0	49.5	48.9	48.4	47.8	47.3	46.8	46.3	45.8	45.3	44.8	44.3	43.9	43.4	43.0	42.5	3
4	50.3	49.8	49.2	48.7	48.2	47.6	47.1	46.6	46.1	45.6	45.1	44.7	44.2	43.8	43.3	42.9	4
5	50.7	50.1	49.6	49.0	48.5	48.0	47.5	47.0	46.5	46.0	45.5	45.0	44.6	44.1	43.6	43.2	5
6	51.0	50.5	49.9	49.4	48.9	48.3	47.8	47.3	46.8	46.3	45.8	45.4	44.9	44.5	44.0	43.6	6
7	51.4	50.8	50.3	49.8	49.2	48.7	48.2	47.7	47.2	46.7	46.2	45.7	45.3	44.8	44.4	43.9	7
8	51.8	51.2	50.7	50.1	49.6	49.1	48.6	48.1	47.6	47.1	46.6	46.1	45.7	45.2	44.8	44.3	8
9	52.1	51.6	51.1	50.5	50.0	49.5	49.0	48.5	48.0	47.5	47.0	46.5	46.1	45.6	45.2	44.7	9
40	52.5	52.0	51.5	50.9	50.4	49.9	49.4	48.9	48.4	47.9	47.4	46.9	46.5	46.0	45.6	45.1	40
1	53.0	52.4	51.9	51.3	50.8	50.3	49.8	49.3	48.8	48.3	47.8	47.4	46.9	46.4	46.0	45.5	1
2	53.4	52.8	52.3	51.8	51.2	50.7	50.2	49.7	49.2	48.8	48.3	47.8	47.3	46.9	46.4	46.0	2
3	53.8	53.3	52.7	52.2	51.7	51.2	50.7	50.2	49.7	49.2	48.7	48.3	47.8	47.3	46.9	46.4	3
4	54.3	53.7	53.2	52.7	52.2	51.6	51.1	50.6	50.2	49.7	49.2	48.7	48.3	47.8	47.4	46.9	4
5	54.7	54.2	53.7	53.1	52.6	52.1	51.6	51.1	50.6	50.2	49.7	49.2	48.8	48.3	47.9	47.4	5
6	55.2	54.7	54.2	53.6	53.1	52.6	52.1	51.6	51.1	50.7	50.2	49.7	49.3	48.8	48.4	47.9	6
7	55.7	55.2	54.7	54.1	53.6	53.1	52.6	52.1	51.7	51.2	50.7	50.2	49.8	49.3	48.9	48.4	7
8	56.2	55.7	55.2	54.7	54.1	53.6	53.2	52.7	52.2	51.7	51.2	50.8	50.3	49.9	49.4	49.0	8
9	56.7	56.2	55.7	55.2	54.7	54.2	53.7	53.2	52.7	52.3	51.8	51.3	50.9	50.4	50.0	49.5	9
50	57.3	56.7	56.2	55.7	55.2	54.7	54.2	53.8	53.3	52.8	52.4	51.9	51.4	51.0	50.6	50.1	50
1	57.8	57.3	56.8	56.3	55.8	55.3	54.8	54.3	53.9	53.4	52.9	52.5	52.0	51.6	51.1	50.7	1
2	58.4	57.9	57.4	56.9	56.4	55.9	55.4	54.9	54.5	54.0	53.5	53.1	52.6	52.2	51.8	51.3	2
3	59.0	58.5	58.0	57.5	57.0	56.5	56.0	55.5	55.1	54.6	54.2	53.7	53.3	52.8	52.4	52.0	3
4	59.6	59.1	58.6	58.1	57.6	57.1	56.6	56.2	55.7	55.3	54.8	54.4	53.9	53.5	53.0	52.6	4
5	60.2	59.7	59.2	58.7	58.2	57.8	57.3	56.8	56.4	55.9	55.5	55.0	54.6	54.1	53.7	53.3	5
6	60.8	60.3	59.8	59.3	58.9	58.4	57.9	57.5	57.0	56.6	56.1	55.7	55.3	54.8	54.4	54.0	6
7	61.4	60.9	60.5	60.0	59.5	59.1	58.6	58.2	57.7	57.3	56.8	56.4	56.0	55.5	55.1	54.7	7
8	62.1	61.6	61.1	60.7	60.2	59.8	59.3	58.9	58.4	58.0	57.5	57.1	56.7	56.3	55.9	55.4	8
9	62.7	62.3	61.8	61.4	60.9	60.5	60.0	59.6	59.1	58.7	58.3	57.9	57.4	57.0	56.6	56.2	9
60	63.4	63.0	62.5	62.1	61.6	61.2	60.8	60.3	59.9	59.5	59.0	58.6	58.2	57.8	57.4	57.0	60
1	64.1	63.7	63.2	62.8	62.4	61.9	61.5	61.1	60.6	60.2	59.8	59.4	59.0	58.6	58.2	57.8	1
2	64.9	64.4	64.0	63.5	63.1	62.7	62.3	61.8	61.4	61.0	60.6	60.2	59.8	59.4	59.0	58.6	2
3	65.6	65.2	64.7	64.3	63.9	63.5	63.0	62.6	62.2	61.8	61.4	61.0	60.6	60.2	59.8	59.5	3
4	66.3	65.9	65.5	65.1	64.7	64.3	63.9	63.4	63.0	62.6	62.3	61.9	61.5	61.1	60.7	60.3	4
5	67.1	66.7	66.3	65.9	65.5	65.1	64.7	64.3	63.9	63.5	63.1	62.7	62.3	62.0	61.6	61.2	5
6	67.9	67.5	67.1	66.7	66.3	65.9	65.5	65.1	64.7	64.4	64.0	63.6	63.2	62.9	62.5	62.1	6
7	68.7	68.3	67.9	67.5	67.1	66.7	66.4	66.0	65.6	65.2	64.9	64.5	64.1	63.8	63.4	63.1	7
8	69.5	69.1	68.7	68.3	68.0	67.6	67.2	66.9	66.5	66.2	65.8	65.4	65.1	64.7	64.4	64.0	8
9	70.3	69.9	69.6	69.2	68.8	68.5	68.1	67.8	67.4	67.1	66.7	66.4	66.0	65.7	65.4	65.0	9
70	71.1	70.8	70.4	70.1	69.7	69.4	69.0	68.7	68.4	68.0	67.7	67.4	67.0	66.7	66.4	66.0	70
LAT.	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24	1.26	1.28	1.30	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
 Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
 Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**1.30 → 1.65**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	1.30	1.32	1.34	1.36	1.38	1.40	1.42	1.44	1.46	1.48	1.50	1.53	1.56	1.59	1.62		1.65
0°	37.6	37.1	36.7	36.3	35.9	35.5	35.2	34.8	34.4	34.0	33.7	33.2	32.7	32.2	31.7	31.2	0°
5	37.7	37.3	36.8	36.4	36.0	35.6	35.3	34.9	34.5	34.1	33.8	33.3	32.8	32.3	31.8	31.3	5
10	38.0	37.6	37.2	36.7	36.3	36.0	35.6	35.2	34.8	34.5	34.1	33.6	33.1	32.6	32.1	31.6	10
4	38.4	38.0	37.6	37.2	36.8	36.4	36.0	35.6	35.2	34.9	34.5	34.0	33.5	33.0	32.5	32.0	4
8	39.0	38.5	38.1	37.7	37.3	36.9	36.5	36.1	35.8	35.4	35.0	34.5	34.0	33.5	33.0	32.5	8
20	39.3	38.9	38.5	38.0	37.6	37.2	36.8	36.5	36.1	35.7	35.4	34.8	34.3	33.8	33.3	32.8	20
2	39.7	39.3	38.8	38.4	38.0	37.6	37.2	36.8	36.5	36.1	35.7	35.2	34.7	34.1	33.7	33.2	2
4	40.1	39.7	39.2	38.8	38.4	38.0	37.6	37.2	36.9	36.5	36.1	35.6	35.1	34.5	34.0	33.6	4
6	40.6	40.1	39.7	39.3	38.9	38.5	38.1	37.7	37.3	36.9	36.6	36.0	35.5	35.0	34.5	34.0	6
8	41.1	40.6	40.2	39.8	39.4	39.0	38.6	38.2	37.8	37.4	37.1	36.5	36.0	35.5	35.0	34.5	8
30	41.6	41.2	40.8	40.3	39.9	39.5	39.1	38.7	38.3	38.0	37.6	37.0	36.5	36.0	35.5	35.0	30
1	41.9	41.5	41.0	40.6	40.2	39.8	39.4	39.0	38.6	38.2	37.9	37.3	36.8	36.3	35.8	35.3	1
2	42.2	41.8	41.3	40.9	40.5	40.1	39.7	39.3	38.9	38.5	38.2	37.6	37.1	36.6	36.1	35.6	2
3	42.5	42.1	41.7	41.2	40.8	40.4	40.0	39.6	39.2	38.9	38.5	37.9	37.4	36.9	36.4	35.9	3
4	42.9	42.4	42.0	41.6	41.2	40.7	40.3	40.0	39.6	39.2	38.8	38.3	37.7	37.2	36.7	36.2	4
5	43.2	42.8	42.3	41.9	41.5	41.1	40.7	40.3	39.9	39.5	39.1	38.6	38.0	37.5	37.0	36.5	5
6	43.6	43.1	42.7	42.3	41.9	41.4	41.0	40.6	40.3	39.9	39.5	38.9	38.4	37.9	37.3	36.8	6
7	43.9	43.5	43.1	42.6	42.2	41.8	41.4	41.0	40.6	40.2	39.9	39.3	38.8	38.2	37.7	37.2	7
8	44.3	43.9	43.4	43.0	42.6	42.2	41.8	41.4	41.0	40.6	40.2	39.7	39.1	38.6	38.1	37.6	8
9	44.7	44.3	43.8	43.4	43.0	42.6	42.2	41.8	41.4	41.0	40.6	40.1	39.5	39.0	38.5	37.9	9
40	45.1	44.7	44.3	43.8	43.4	43.0	42.6	42.2	41.8	41.4	41.0	40.5	39.9	39.4	38.9	38.3	40
1	45.5	45.1	44.7	44.3	43.8	43.4	43.0	42.6	42.2	41.8	41.5	40.9	40.3	39.8	39.3	38.8	1
2	46.0	45.6	45.1	44.7	44.3	43.9	43.5	43.1	42.7	42.3	41.9	41.3	40.8	40.2	39.7	39.2	2
3	46.4	46.0	45.6	45.2	44.7	44.3	43.9	43.5	43.1	42.7	42.4	41.8	41.2	40.7	40.2	39.6	3
4	46.9	46.5	46.1	45.6	45.2	44.8	44.4	44.0	43.6	43.2	42.8	42.3	41.7	41.2	40.6	40.1	4
5	47.4	47.0	46.5	46.1	45.7	45.3	44.9	44.5	44.1	43.7	43.3	42.7	42.2	41.7	41.1	40.6	5
6	47.9	47.5	47.1	46.6	46.2	45.8	45.4	45.0	44.6	44.2	43.8	43.3	42.7	42.2	41.6	41.1	6
7	48.4	48.0	47.6	47.2	46.7	46.3	45.9	45.5	45.1	44.7	44.3	43.8	43.2	42.7	42.1	41.6	7
8	49.0	48.5	48.1	47.7	47.3	46.9	46.5	46.1	45.7	45.3	44.9	44.3	43.8	43.2	42.7	42.2	8
9	49.5	49.1	48.7	48.3	47.8	47.4	47.0	46.6	46.2	45.8	45.5	44.9	44.3	43.8	43.3	42.7	9
50	50.1	49.7	49.3	48.8	48.4	48.0	47.6	47.2	46.8	46.4	46.0	45.5	44.9	44.4	43.8	43.3	50
1	50.7	50.3	49.9	49.4	49.0	48.6	48.2	47.8	47.4	47.0	46.7	46.1	45.5	45.0	44.4	43.9	1
2	51.3	50.9	50.5	50.1	49.6	49.2	48.8	48.4	48.0	47.7	47.3	46.7	46.2	45.6	45.1	44.5	2
3	52.0	51.5	51.1	50.7	50.3	49.9	49.5	49.1	48.7	48.3	47.9	47.4	46.8	46.3	45.7	45.2	3
4	52.6	52.2	51.8	51.4	51.0	50.5	50.1	49.8	49.4	49.0	48.6	48.0	47.5	46.9	46.4	45.9	4
5	53.3	52.9	52.5	52.0	51.6	51.2	50.8	50.4	50.1	49.7	49.3	48.7	48.2	47.6	47.1	46.6	5
6	54.0	53.6	53.2	52.7	52.3	51.9	51.5	51.2	50.8	50.4	50.0	49.5	48.9	48.4	47.8	47.3	6
7	54.7	54.3	53.9	53.5	53.1	52.7	52.3	51.9	51.5	51.1	50.8	50.2	49.6	49.1	48.6	48.1	7
8	55.4	55.0	54.6	54.2	53.8	53.4	53.0	52.7	52.3	51.9	51.5	51.0	50.4	49.9	49.4	48.8	8
9	56.2	55.8	55.4	55.0	54.6	54.2	53.8	53.4	53.1	52.7	52.3	51.8	51.2	50.7	50.2	49.6	9
60	57.0	56.6	56.2	55.8	55.4	55.0	54.6	54.2	53.9	53.5	53.1	52.6	52.0	51.5	51.0	50.5	60
1	57.8	57.4	57.0	56.6	56.2	55.8	55.5	55.1	54.7	54.3	54.0	53.4	52.9	52.4	51.9	51.3	1
2	58.6	58.2	57.8	57.4	57.1	56.7	56.3	55.9	55.6	55.2	54.8	54.3	53.8	53.3	52.7	52.2	2
3	59.5	59.1	58.7	58.3	57.9	57.6	57.2	56.8	56.5	56.1	55.7	55.2	54.7	54.2	53.7	53.2	3
4	60.3	59.9	59.6	59.2	58.8	58.5	58.1	57.7	57.4	57.0	56.7	56.1	55.6	55.1	54.6	54.1	4
5	61.2	60.8	60.5	60.1	59.7	59.4	59.0	58.7	58.3	58.0	57.6	57.1	56.6	56.1	55.6	55.1	5
6	62.1	61.8	61.4	61.1	60.7	60.3	60.0	59.6	59.3	59.0	58.6	58.1	57.6	57.1	56.6	56.1	6
7	63.1	62.7	62.4	62.0	61.7	61.3	61.0	60.6	60.3	60.0	59.6	59.1	58.6	58.1	57.7	57.2	7
8	64.0	63.7	63.3	63.0	62.7	62.3	62.0	61.7	61.3	61.0	60.7	60.2	59.7	59.2	58.7	58.3	8
9	65.0	64.7	64.3	64.0	63.7	63.4	63.0	62.7	62.4	62.1	61.7	61.3	60.8	60.3	59.9	59.4	9
70	66.0	65.7	65.4	65.1	64.7	64.4	64.1	63.8	63.5	63.2	62.8	62.4	61.9	61.5	61.0	60.6	70

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h1 000° → 180° o azimute é dos quadrantes W  
Se h1 180° → 360° o azimute é dos quadrantes E



**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**1.65 → 2.20**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	1.65	1.68	1.71	1.74	1.77	1.80	1.84	1.88	1.92	1.96	2.00	2.04	2.08	2.12	2.16		2.20
<b>0</b>	31.2	30.8	30.3	29.9	29.5	29.1	28.5	28.0	27.5	27.0	26.6	26.1	25.7	25.3	24.8	24.4	<b>0</b>
<b>5</b>	31.3	30.9	30.4	30.0	29.6	29.1	28.6	28.1	27.6	27.1	26.7	26.2	25.8	25.3	24.9	24.5	<b>5</b>
<b>10</b>	31.6	31.1	30.7	30.3	29.8	29.4	28.9	28.4	27.9	27.4	26.9	26.5	26.0	25.6	25.2	24.8	<b>10</b>
<b>4</b>	32.0	31.5	31.1	30.6	30.2	29.8	29.3	28.7	28.2	27.7	27.3	26.8	26.4	25.9	25.5	25.1	<b>4</b>
<b>8</b>	32.5	32.0	31.6	31.1	30.7	30.3	29.7	29.2	28.7	28.2	27.7	27.3	26.8	26.4	26.0	25.5	<b>8</b>
<b>20</b>	32.8	32.4	31.9	31.4	31.0	30.6	30.0	29.5	29.0	28.5	28.0	27.5	27.1	26.7	26.2	25.8	<b>20</b>
<b>2</b>	33.2	32.7	32.2	31.8	31.4	30.9	30.4	29.8	29.3	28.8	28.3	27.9	27.4	27.0	26.5	26.1	<b>2</b>
<b>4</b>	33.6	33.1	32.6	32.2	31.7	31.3	30.7	30.2	29.7	29.2	28.7	28.2	27.8	27.3	26.9	26.5	<b>4</b>
<b>6</b>	34.0	33.5	33.0	32.6	32.2	31.7	31.2	30.6	30.1	29.6	29.1	28.6	28.1	27.7	27.3	26.8	<b>6</b>
<b>8</b>	34.5	34.0	33.5	33.1	32.6	32.2	31.6	31.1	30.5	30.0	29.5	29.0	28.6	28.1	27.7	27.2	<b>8</b>
<b>30</b>	35.0	34.5	34.0	33.6	33.1	32.7	32.1	31.6	31.0	30.5	30.0	29.5	29.0	28.6	28.1	27.7	<b>30</b>
<b>1</b>	35.3	34.8	34.3	33.8	33.4	32.9	32.4	31.8	31.3	30.8	30.3	29.8	29.3	28.8	28.4	27.9	<b>1</b>
<b>2</b>	35.6	35.1	34.6	34.1	33.7	33.2	32.7	32.1	31.6	31.0	30.5	30.0	29.5	29.1	28.6	28.2	<b>2</b>
<b>3</b>	35.9	35.4	34.9	34.4	34.0	33.5	32.9	32.4	31.8	31.3	30.8	30.3	29.8	29.4	28.9	28.5	<b>3</b>
<b>4</b>	36.2	35.7	35.2	34.7	34.3	33.8	33.2	32.7	32.1	31.6	31.1	30.6	30.1	29.6	29.2	28.7	<b>4</b>
<b>5</b>	36.5	36.0	35.5	35.1	34.6	34.1	33.6	33.0	32.4	31.9	31.4	30.9	30.4	29.9	29.5	29.0	<b>5</b>
<b>6</b>	36.8	36.3	35.9	35.4	34.9	34.5	33.9	33.3	32.8	32.2	31.7	31.2	30.7	30.2	29.8	29.3	<b>6</b>
<b>7</b>	37.2	36.7	36.2	35.7	35.3	34.8	34.2	33.7	33.1	32.6	32.0	31.5	31.0	30.6	30.1	29.6	<b>7</b>
<b>8</b>	37.6	37.1	36.6	36.1	35.6	35.2	34.6	34.0	33.5	32.9	32.4	31.9	31.4	30.9	30.4	30.0	<b>8</b>
<b>9</b>	37.9	37.4	37.0	36.5	36.0	35.6	35.0	34.4	33.8	33.3	32.8	32.2	31.7	31.3	30.8	30.3	<b>9</b>
<b>40</b>	38.3	37.8	37.4	36.9	36.4	36.0	35.4	34.8	34.2	33.7	33.1	32.6	32.1	31.6	31.1	30.7	<b>40</b>
<b>1</b>	38.8	38.3	37.8	37.3	36.8	36.4	35.8	35.2	34.6	34.1	33.5	33.0	32.5	32.0	31.5	31.1	<b>1</b>
<b>2</b>	39.2	38.7	38.2	37.7	37.2	36.8	36.2	35.6	35.0	34.5	33.9	33.4	32.9	32.4	31.9	31.5	<b>2</b>
<b>3</b>	39.6	39.1	38.6	38.2	37.7	37.2	36.6	36.0	35.5	34.9	34.4	33.8	33.3	32.8	32.3	31.9	<b>3</b>
<b>4</b>	40.1	39.6	39.1	38.6	38.1	37.7	37.1	36.5	35.9	35.3	34.8	34.3	33.8	33.3	32.8	32.3	<b>4</b>
<b>5</b>	40.6	40.1	39.6	39.1	38.6	38.2	37.5	37.0	36.4	35.8	35.3	34.7	34.2	33.7	33.2	32.7	<b>5</b>
<b>6</b>	41.1	40.6	40.1	39.6	39.1	38.7	38.0	37.4	36.9	36.3	35.7	35.2	34.7	34.2	33.7	33.2	<b>6</b>
<b>7</b>	41.6	41.1	40.6	40.1	39.6	39.2	38.6	38.0	37.4	36.8	36.2	35.7	35.2	34.7	34.2	33.7	<b>7</b>
<b>8</b>	42.2	41.7	41.2	40.7	40.2	39.7	39.1	38.5	37.9	37.3	36.8	36.2	35.7	35.2	34.7	34.2	<b>8</b>
<b>9</b>	42.7	42.2	41.7	41.2	40.7	40.3	39.6	39.0	38.4	37.9	37.3	36.8	36.2	35.7	35.2	34.7	<b>9</b>
<b>50</b>	43.3	42.8	42.3	41.8	41.3	40.8	40.2	39.6	39.0	38.4	37.9	37.3	36.8	36.3	35.8	35.3	<b>50</b>
<b>1</b>	43.9	43.4	42.9	42.4	41.9	41.4	40.8	40.2	39.6	39.0	38.5	37.9	37.4	36.9	36.3	35.8	<b>1</b>
<b>2</b>	44.5	44.0	43.5	43.0	42.5	42.1	41.4	40.8	40.2	39.6	39.1	38.5	38.0	37.5	36.9	36.4	<b>2</b>
<b>3</b>	45.2	44.7	44.2	43.7	43.2	42.7	42.1	41.5	40.9	40.3	39.7	39.2	38.6	38.1	37.6	37.1	<b>3</b>
<b>4</b>	45.9	45.4	44.9	44.4	43.9	43.4	42.8	42.1	41.5	41.0	40.4	39.8	39.3	38.7	38.2	37.7	<b>4</b>
<b>5</b>	46.6	46.1	45.6	45.1	44.6	44.1	43.5	42.8	42.2	41.7	41.1	40.5	40.0	39.4	38.9	38.4	<b>5</b>
<b>6</b>	47.3	46.8	46.3	45.8	45.3	44.8	44.2	43.6	43.0	42.4	41.8	41.2	40.7	40.1	39.6	39.1	<b>6</b>
<b>7</b>	48.1	47.5	47.0	46.5	46.0	45.6	44.9	44.3	43.7	43.1	42.6	42.0	41.4	40.9	40.4	39.8	<b>7</b>
<b>8</b>	48.8	48.3	47.8	47.3	46.8	46.4	45.7	45.1	44.5	43.9	43.3	42.8	42.2	41.7	41.1	40.6	<b>8</b>
<b>9</b>	49.6	49.1	48.6	48.1	47.6	47.2	46.5	45.9	45.3	44.7	44.2	43.6	43.0	42.5	42.0	41.4	<b>9</b>
<b>60</b>	50.5	50.0	49.5	49.0	48.5	48.0	47.4	46.8	46.2	45.6	45.0	44.4	43.9	43.3	42.8	42.3	<b>60</b>
<b>1</b>	51.3	50.8	50.3	49.9	49.4	48.9	48.3	47.7	47.1	46.5	45.9	45.3	44.8	44.2	43.7	43.2	<b>1</b>
<b>2</b>	52.2	51.7	51.2	50.8	50.3	49.8	49.2	48.6	48.0	47.4	46.8	46.2	45.7	45.1	44.6	44.1	<b>2</b>
<b>3</b>	53.2	52.7	52.2	51.7	51.2	50.7	50.1	49.5	48.9	48.3	47.8	47.2	46.6	46.1	45.6	45.0	<b>3</b>
<b>4</b>	54.1	53.6	53.1	52.7	52.2	51.7	51.1	50.5	49.9	49.3	48.8	48.2	47.6	47.1	46.6	46.0	<b>4</b>
<b>5</b>	55.1	54.6	54.1	53.7	53.2	52.7	52.1	51.5	50.9	50.4	49.8	49.2	48.7	48.1	47.6	47.1	<b>5</b>
<b>6</b>	56.1	55.7	55.2	54.7	54.2	53.8	53.2	52.6	52.0	51.4	50.9	50.3	49.8	49.2	48.7	48.2	<b>6</b>
<b>7</b>	57.2	56.7	56.3	55.8	55.3	54.9	54.3	53.7	53.1	52.6	52.0	51.4	50.9	50.4	49.8	49.3	<b>7</b>
<b>8</b>	58.3	57.8	57.4	56.9	56.5	56.0	55.4	54.8	54.3	53.7	53.2	52.6	52.1	51.5	51.0	50.5	<b>8</b>
<b>9</b>	59.4	58.9	58.5	58.1	57.6	57.2	56.6	56.0	55.5	54.9	54.4	53.8	53.3	52.8	52.3	51.7	<b>9</b>
<b>70</b>	60.6	60.1	59.7	59.2	58.8	58.4	57.8	57.3	56.7	56.2	55.6	55.1	54.6	54.1	53.5	53.0	<b>70</b>
LAT.	1.65	1.68	1.71	1.74	1.77	1.80	1.84	1.88	1.92	1.96	2.00	2.04	2.08	2.12	2.16	2.20	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**2.20 → 2.90**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	2.20	2.24	2.28	2.32	2.36	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85		2.90
0°	24.0	24.1	23.7	23.3	23.0	22.6	22.2	21.8	21.4	21.0	20.7	20.3	20.0	19.7	19.3	19.0	0°
5	24.5	24.1	23.8	23.4	23.0	22.7	22.3	21.9	21.5	21.1	20.7	20.4	20.1	19.7	19.4	19.1	5
10	24.8	24.4	24.0	23.6	23.3	22.9	22.5	22.1	21.7	21.3	21.0	20.6	20.3	19.9	19.6	19.3	10
4	25.1	24.7	24.3	24.0	23.6	23.2	22.8	22.4	22.0	21.6	21.3	20.9	20.5	20.2	19.9	19.6	4
8	25.5	25.1	24.8	24.4	24.0	23.7	23.2	22.8	22.4	22.0	21.6	21.3	20.9	20.6	20.3	19.9	8
20	25.8	25.4	25.0	24.6	24.3	23.9	23.5	23.1	22.7	22.3	21.9	21.5	21.2	20.8	20.5	20.2	20
2	26.1	25.7	25.3	24.9	24.6	24.2	23.8	23.3	22.9	22.5	22.1	21.8	21.4	21.1	20.7	20.4	2
4	26.5	26.0	25.6	25.3	24.9	24.5	24.1	23.6	23.2	22.8	22.4	22.1	21.7	21.4	21.0	20.7	4
6	26.8	26.4	26.0	25.6	25.2	24.9	24.4	24.0	23.6	23.2	22.8	22.4	22.0	21.7	21.3	21.0	6
8	27.2	26.8	26.4	26.0	25.6	25.3	24.8	24.4	23.9	23.5	23.1	22.8	22.4	22.0	21.7	21.3	8
30	27.7	27.3	26.9	26.5	26.1	25.7	25.2	24.8	24.4	23.9	23.5	23.2	22.8	22.4	22.1	21.7	30
1	27.9	27.5	27.1	26.7	26.3	25.9	25.5	25.0	24.6	24.2	23.8	23.4	23.0	22.6	22.3	21.9	1
2	28.2	27.8	27.3	26.9	26.5	26.2	25.7	25.3	24.8	24.4	24.0	23.6	23.2	22.8	22.5	22.1	2
3	28.5	28.0	27.6	27.2	26.8	26.4	26.0	25.5	25.1	24.6	24.2	23.8	23.4	23.1	22.7	22.4	3
4	28.7	28.3	27.9	27.5	27.1	26.7	26.2	25.8	25.3	24.9	24.5	24.1	23.7	23.3	22.9	22.6	4
5	29.0	28.6	28.2	27.8	27.4	27.0	26.5	26.0	25.6	25.2	24.7	24.3	23.9	23.6	23.2	22.8	5
6	29.3	28.9	28.5	28.0	27.6	27.2	26.8	26.3	25.9	25.4	25.0	24.6	24.2	23.8	23.4	23.1	6
7	29.6	29.2	28.8	28.4	27.9	27.6	27.1	26.6	26.2	25.7	25.3	24.9	24.5	24.1	23.7	23.4	7
8	30.0	29.5	29.1	28.7	28.3	27.9	27.4	26.9	26.5	26.0	25.6	25.2	24.8	24.4	24.0	23.6	8
9	30.3	29.9	29.4	29.0	28.6	28.2	27.7	27.2	26.8	26.3	25.9	25.5	25.1	24.7	24.3	23.9	9
40	30.7	30.2	29.8	29.4	28.9	28.5	28.0	27.6	27.1	26.7	26.2	25.8	25.4	25.0	24.6	24.2	40
1	31.1	30.6	30.2	29.7	29.3	28.9	28.4	27.9	27.5	27.0	26.6	26.1	25.7	25.3	24.9	24.6	1
2	31.5	31.0	30.5	30.1	29.7	29.3	28.8	28.3	27.8	27.4	26.9	26.5	26.1	25.7	25.3	24.9	2
3	31.9	31.4	31.0	30.5	30.1	29.7	29.2	28.7	28.2	27.7	27.3	26.9	26.4	26.0	25.6	25.2	3
4	32.3	31.8	31.4	30.9	30.5	30.1	29.6	29.1	28.6	28.1	27.7	27.2	26.8	26.4	26.0	25.6	4
5	32.7	32.3	31.8	31.4	30.9	30.5	30.0	29.5	29.0	28.5	28.1	27.6	27.2	26.8	26.4	26.0	5
6	33.2	32.7	32.3	31.8	31.4	31.0	30.4	29.9	29.4	29.0	28.5	28.1	27.6	27.2	26.8	26.4	6
7	33.7	33.2	32.7	32.3	31.9	31.4	30.9	30.4	29.9	29.4	29.0	28.5	28.1	27.6	27.2	26.8	7
8	34.2	33.7	33.2	32.8	32.3	31.9	31.4	30.9	30.4	29.9	29.4	29.0	28.5	28.1	27.7	27.3	8
9	34.7	34.2	33.8	33.3	32.9	32.4	31.9	31.4	30.9	30.4	29.9	29.4	29.0	28.6	28.1	27.7	9
50	35.3	34.8	34.3	33.8	33.4	33.0	32.4	31.9	31.4	30.9	30.4	30.0	29.5	29.1	28.6	28.2	50
1	35.8	35.4	34.9	34.4	34.0	33.5	33.0	32.4	31.9	31.4	30.9	30.5	30.0	29.6	29.1	28.7	1
2	36.4	35.9	35.5	35.0	34.5	34.1	33.5	33.0	32.5	32.0	31.5	31.0	30.6	30.1	29.7	29.3	2
3	37.1	36.6	36.1	35.6	35.1	34.7	34.1	33.6	33.1	32.6	32.1	31.6	31.1	30.7	30.2	29.8	3
4	37.7	37.2	36.7	36.3	35.8	35.3	34.8	34.2	33.7	33.2	32.7	32.2	31.7	31.3	30.8	30.4	4
5	38.4	37.9	37.4	36.9	36.5	36.0	35.4	34.9	34.4	33.8	33.3	32.9	32.4	31.9	31.5	31.0	5
6	39.1	38.6	38.1	37.6	37.2	36.7	36.1	35.6	35.0	34.5	34.0	33.5	33.0	32.6	32.1	31.7	6
7	39.8	39.3	38.8	38.4	37.9	37.4	36.8	36.3	35.8	35.2	34.7	34.2	33.7	33.3	32.8	32.3	7
8	40.6	40.1	39.6	39.1	38.6	38.2	37.6	37.0	36.5	36.0	35.5	35.0	34.5	34.0	33.5	33.1	8
9	41.4	40.9	40.4	39.9	39.4	39.0	38.4	37.8	37.3	36.8	36.2	35.7	35.2	34.7	34.3	33.8	9
60	42.3	41.8	41.3	40.8	40.3	39.8	39.2	38.7	38.1	37.6	37.0	36.5	36.0	35.5	35.1	34.6	60
1	43.2	42.6	42.1	41.6	41.2	40.7	40.1	39.5	39.0	38.4	37.9	37.4	36.9	36.4	35.9	35.4	1
2	44.1	43.6	43.1	42.6	42.1	41.6	41.0	40.4	39.9	39.3	38.8	38.3	37.8	37.3	36.8	36.3	2
3	45.0	44.5	44.0	43.5	43.0	42.5	42.0	41.4	40.8	40.3	39.7	39.2	38.7	38.2	37.7	37.2	3
4	46.0	45.5	45.0	44.5	44.0	43.5	43.0	42.4	41.8	41.3	40.7	40.2	39.7	39.2	38.7	38.2	4
5	47.1	46.6	46.1	45.6	45.1	44.6	44.0	43.4	42.9	42.3	41.8	41.2	40.7	40.2	39.7	39.2	5
6	48.2	47.7	47.2	46.7	46.2	45.7	45.1	44.5	44.0	43.4	42.9	42.3	41.8	41.3	40.8	40.3	6
7	49.3	48.8	48.3	47.8	47.3	46.8	46.3	45.7	45.1	44.5	44.0	43.5	42.9	42.4	41.9	41.4	7
8	50.5	50.0	49.5	49.0	48.5	48.0	47.5	46.9	46.3	45.8	45.2	44.7	44.1	43.6	43.1	42.6	8
9	51.7	51.2	50.7	50.3	49.8	49.3	48.7	48.1	47.6	47.0	46.5	45.9	45.4	44.9	44.4	43.9	9
70	53.0	52.5	52.1	51.6	51.1	50.6	50.0	49.5	48.9	48.4	47.8	47.3	46.8	46.2	45.7	45.2	70
LAT.	2.20	2.24	2.28	2.32	2.36	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h| 000° → 180° o azimute é dos quadrantes W  
Se h| 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**2.90 → 3.70**

LAT. (OU LATITUDE DE PARTIDA)	C																LAT. (OU LATITUDE DE PARTIDA)
	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.46	3.52	3.58	3.64	3.70	
<b>0°</b>	19.0	18.7	18.4	18.2	17.9	17.6	17.4	17.1	16.9	16.6	16.4	16.1	15.9	15.6	15.4	15.1	<b>0°</b>
<b>5</b>	19.1	18.8	18.5	18.2	17.9	17.7	17.4	17.2	16.9	16.7	16.4	16.2	15.9	15.7	15.4	15.2	<b>5</b>
<b>10</b>	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.4	17.1	16.9	16.6	16.4	16.1	15.8	15.6	15.3	<b>10</b>
<b>4</b>	19.6	19.3	19.0	18.7	18.4	18.1	17.9	17.6	17.3	17.1	16.9	16.6	16.3	16.1	15.8	15.6	<b>4</b>
<b>8</b>	19.9	19.6	19.3	19.0	18.7	18.5	18.2	17.9	17.7	17.4	17.2	16.9	16.6	16.4	16.1	15.9	<b>8</b>
<b>20</b>	20.2	19.8	19.5	19.2	18.9	18.7	18.4	18.1	17.9	17.6	17.4	17.1	16.8	16.6	16.3	16.0	<b>20</b>
<b>2</b>	20.4	20.1	19.8	19.5	19.2	18.9	18.6	18.4	18.1	17.8	17.6	17.3	17.0	16.8	16.5	16.3	<b>2</b>
<b>4</b>	20.7	20.4	20.0	19.7	19.4	19.2	18.9	18.6	18.4	18.1	17.8	17.6	17.3	17.0	16.7	16.5	<b>4</b>
<b>6</b>	21.0	20.7	20.3	20.0	19.7	19.5	19.2	18.9	18.6	18.4	18.1	17.8	17.5	17.3	17.0	16.7	<b>6</b>
<b>8</b>	21.3	21.0	20.7	20.4	20.1	19.8	19.5	19.2	18.9	18.7	18.4	18.1	17.8	17.6	17.3	17.0	<b>8</b>
<b>30</b>	21.7	21.4	21.1	20.7	20.4	20.1	19.8	19.6	19.3	19.0	18.8	18.5	18.2	17.9	17.6	17.3	<b>30</b>
<b>1</b>	21.9	21.6	21.2	20.9	20.6	20.3	20.0	19.7	19.5	19.2	18.9	18.6	18.3	18.0	17.8	17.5	<b>1</b>
<b>2</b>	22.1	21.8	21.5	21.1	20.8	20.5	20.2	19.9	19.7	19.4	19.1	18.8	18.5	18.2	17.9	17.7	<b>2</b>
<b>3</b>	22.4	22.0	21.7	21.4	21.0	20.7	20.4	20.1	19.9	19.6	19.3	19.0	18.7	18.4	18.1	17.9	<b>3</b>
<b>4</b>	22.6	22.2	21.9	21.6	21.3	21.0	20.7	20.4	20.1	19.8	19.5	19.2	18.9	18.6	18.3	18.1	<b>4</b>
<b>5</b>	22.8	22.5	22.1	21.8	21.5	21.2	20.9	20.6	20.3	20.0	19.8	19.4	19.1	18.8	18.5	18.3	<b>5</b>
<b>6</b>	23.1	22.7	22.4	22.1	21.7	21.4	21.1	20.8	20.5	20.3	20.0	19.7	19.3	19.0	18.8	18.5	<b>6</b>
<b>7</b>	23.4	23.0	22.7	22.3	22.0	21.7	21.4	21.1	20.8	20.5	20.2	19.9	19.6	19.3	19.0	18.7	<b>7</b>
<b>8</b>	23.6	23.3	22.9	22.6	22.3	21.9	21.6	21.3	21.0	20.7	20.5	20.1	19.8	19.5	19.2	18.9	<b>8</b>
<b>9</b>	23.9	23.6	23.2	22.9	22.5	22.2	21.9	21.6	21.3	21.0	20.7	20.4	20.1	19.8	19.5	19.2	<b>9</b>
<b>40</b>	24.2	23.9	23.5	23.2	22.8	22.5	22.2	21.9	21.6	21.3	21.0	20.7	20.3	20.0	19.7	19.4	<b>40</b>
<b>1</b>	24.6	24.2	23.8	23.5	23.1	22.8	22.5	22.2	21.9	21.6	21.3	21.0	20.6	20.3	20.0	19.7	<b>1</b>
<b>2</b>	24.9	24.5	24.2	23.8	23.5	23.1	22.8	22.5	22.2	21.9	21.6	21.3	20.9	20.6	20.3	20.0	<b>2</b>
<b>3</b>	25.2	24.9	24.5	24.1	23.8	23.5	23.1	22.8	22.5	22.2	21.9	21.6	21.2	20.9	20.6	20.3	<b>3</b>
<b>4</b>	25.6	25.2	24.9	24.5	24.2	23.8	23.5	23.2	22.8	22.5	22.2	21.9	21.6	21.2	20.9	20.6	<b>4</b>
<b>5</b>	26.0	25.6	25.2	24.9	24.5	24.2	23.8	23.5	23.2	22.9	22.6	22.2	21.9	21.6	21.2	20.9	<b>5</b>
<b>6</b>	26.4	26.0	25.6	25.3	24.9	24.6	24.2	23.9	23.6	23.3	22.9	22.6	22.2	21.9	21.6	21.3	<b>6</b>
<b>7</b>	26.8	26.4	26.0	25.7	25.3	25.0	24.6	24.3	24.0	23.6	23.3	23.0	22.6	22.3	21.9	21.6	<b>7</b>
<b>8</b>	27.3	26.9	26.5	26.1	25.7	25.4	25.0	24.7	24.4	24.0	23.7	23.4	23.0	22.7	22.3	22.0	<b>8</b>
<b>9</b>	27.7	27.3	26.9	26.6	26.2	25.8	25.5	25.1	24.8	24.5	24.1	23.8	23.4	23.1	22.7	22.4	<b>9</b>
<b>50</b>	28.2	27.8	27.4	27.0	26.6	26.3	25.9	25.6	25.2	24.9	24.6	24.2	23.8	23.5	23.1	22.8	<b>50</b>
<b>1</b>	28.7	28.3	27.9	27.5	27.1	26.8	26.4	26.1	25.7	25.4	25.0	24.7	24.3	23.9	23.6	23.2	<b>1</b>
<b>2</b>	29.3	28.8	28.4	28.0	27.7	27.3	26.9	26.6	26.2	25.9	25.6	25.1	24.8	24.4	24.0	23.7	<b>2</b>
<b>3</b>	29.8	29.4	29.0	28.6	28.2	27.8	27.4	27.1	26.7	26.4	26.0	25.7	25.3	24.9	24.5	24.2	<b>3</b>
<b>4</b>	30.4	30.0	29.6	29.2	28.8	28.4	28.0	27.6	27.3	26.9	26.6	26.2	25.8	25.4	25.1	24.7	<b>4</b>
<b>5</b>	31.0	30.6	30.2	29.8	29.4	29.0	28.6	28.2	27.8	27.5	27.1	26.7	26.3	26.0	25.6	25.2	<b>5</b>
<b>6</b>	31.7	31.2	30.8	30.4	30.0	29.6	29.2	28.8	28.5	28.1	27.7	27.3	26.9	26.5	26.2	25.8	<b>6</b>
<b>7</b>	32.3	31.9	31.5	31.0	30.6	30.2	29.8	29.5	29.1	28.7	28.4	28.0	27.5	27.2	26.8	26.4	<b>7</b>
<b>8</b>	33.1	32.6	32.2	31.7	31.3	30.9	30.5	30.1	29.8	29.4	29.0	28.6	28.2	27.8	27.4	27.0	<b>8</b>
<b>9</b>	33.8	33.4	32.9	32.5	32.1	31.6	31.2	30.9	30.5	30.1	29.7	29.3	28.9	28.5	28.1	27.7	<b>9</b>
<b>60</b>	34.6	34.1	33.7	33.3	32.8	32.4	32.0	31.6	31.2	30.8	30.5	30.0	29.6	29.2	28.8	28.4	<b>60</b>
<b>1</b>	35.4	35.0	34.5	34.1	33.6	33.2	32.8	32.4	32.0	31.6	31.2	30.8	30.4	29.9	29.5	29.1	<b>1</b>
<b>2</b>	36.3	35.8	35.4	34.9	34.5	34.1	33.6	33.2	32.8	32.4	32.1	31.6	31.2	30.8	30.3	29.9	<b>2</b>
<b>3</b>	37.2	36.7	36.3	35.8	35.4	35.0	34.5	34.1	33.7	33.3	32.9	32.5	32.0	31.6	31.2	30.8	<b>3</b>
<b>4</b>	38.2	37.7	37.2	36.8	36.3	35.9	35.5	35.1	34.7	34.3	33.9	33.4	32.9	32.5	32.1	31.7	<b>4</b>
<b>5</b>	39.2	38.7	38.3	37.8	37.4	36.9	36.5	36.1	35.6	35.2	34.8	34.4	33.9	33.5	33.0	32.6	<b>5</b>
<b>6</b>	40.3	39.8	39.3	38.9	38.4	38.0	37.5	37.1	36.7	36.3	35.9	35.4	34.9	34.5	34.0	33.6	<b>6</b>
<b>7</b>	41.4	40.9	40.5	40.0	39.5	39.1	38.7	38.2	37.8	37.4	37.0	36.5	36.0	35.6	35.1	34.7	<b>7</b>
<b>8</b>	42.6	42.1	41.7	41.2	40.7	40.3	39.8	39.4	39.0	38.5	38.1	37.7	37.2	36.7	36.3	35.8	<b>8</b>
<b>9</b>	43.9	43.4	42.9	42.5	42.0	41.5	41.1	40.6	40.2	39.8	39.4	38.9	38.4	37.9	37.5	37.0	<b>9</b>
<b>70</b>	45.2	44.7	44.3	43.8	43.3	42.9	42.4	42.0	41.5	41.1	40.7	40.2	39.7	39.2	38.8	38.3	<b>70</b>
LAT.	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.46	3.52	3.58	3.64	3.70	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**3.70 → 5.00**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	3.70	3.76	3.82	3.88	3.94	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90		5.00
0°	15.1	14.9	14.7	14.5	14.2	14.0	13.7	13.4	13.1	12.8	12.5	12.3	12.0	11.8	11.5	11.3	0°
5	15.2	14.9	14.7	14.5	14.3	14.1	13.8	13.4	13.1	12.9	12.6	12.3	12.1	11.8	11.6	11.4	5
10	15.3	15.1	14.9	14.7	14.5	14.2	13.9	13.6	13.3	13.0	12.7	12.4	12.2	11.9	11.7	11.5	10
4	15.6	15.3	15.1	14.9	14.7	14.4	14.1	13.8	13.5	13.2	12.9	12.6	12.4	12.1	11.9	11.6	4
8	15.9	15.6	15.4	15.2	14.9	14.7	14.4	14.1	13.7	13.4	13.2	12.9	12.6	12.4	12.1	11.9	8
20	16.0	15.8	15.6	15.3	15.1	14.9	14.6	14.2	13.9	13.6	13.3	13.0	12.8	12.5	12.3	12.0	20
2	16.3	16.0	15.8	15.5	15.3	15.1	14.7	14.4	14.1	13.8	13.5	13.2	12.9	12.7	12.4	12.2	2
4	16.5	16.2	16.0	15.8	15.5	15.3	14.9	14.6	14.3	14.0	13.7	13.4	13.1	12.8	12.6	12.3	4
6	16.7	16.5	16.2	16.0	15.8	15.5	15.2	14.8	14.5	14.2	13.9	13.6	13.3	13.1	12.8	12.5	6
8	17.0	16.8	16.5	16.3	16.0	15.8	15.4	15.1	14.8	14.4	14.1	13.8	13.5	13.3	13.0	12.8	8
30	17.3	17.1	16.8	16.6	16.3	16.1	15.7	15.4	15.0	14.7	14.4	14.1	13.8	13.5	13.3	13.0	30
1	17.5	17.2	17.0	16.7	16.5	16.3	15.9	15.5	15.2	14.8	14.5	14.2	13.9	13.7	13.4	13.1	1
2	17.7	17.4	17.2	16.9	16.7	16.4	16.0	15.7	15.3	15.0	14.7	14.4	14.1	13.8	13.5	13.3	2
3	17.9	17.6	17.3	17.1	16.8	16.6	16.2	15.8	15.5	15.2	14.8	14.5	14.2	14.0	13.7	13.4	3
4	18.1	17.8	17.5	17.3	17.0	16.8	16.4	16.0	15.7	15.3	15.0	14.7	14.4	14.1	13.8	13.6	4
5	18.3	18.0	17.7	17.5	17.2	17.0	16.6	16.2	15.8	15.5	15.2	14.9	14.6	14.3	14.0	13.7	5
6	18.5	18.2	17.9	17.7	17.4	17.2	16.8	16.4	16.0	15.7	15.4	15.0	14.7	14.4	14.2	13.9	6
7	18.7	18.4	18.1	17.9	17.6	17.4	17.0	16.6	16.2	15.9	15.5	15.2	14.9	14.6	14.3	14.1	7
8	18.9	18.6	18.4	18.1	17.9	17.6	17.2	16.8	16.4	16.1	15.7	15.4	15.1	14.8	14.5	14.2	8
9	19.2	18.9	18.6	18.3	18.1	17.8	17.4	17.0	16.7	16.3	16.0	15.6	15.3	15.0	14.7	14.4	9
40	19.4	19.1	18.9	18.6	18.3	18.1	17.7	17.3	16.9	16.5	16.2	15.8	15.5	15.2	14.9	14.6	40
1	19.7	19.4	19.1	18.9	18.6	18.3	17.9	17.5	17.1	16.8	16.4	16.1	15.7	15.4	15.1	14.8	1
2	20.0	19.7	19.4	19.1	18.9	18.6	18.2	17.8	17.4	17.0	16.6	16.3	16.0	15.7	15.4	15.1	2
3	20.3	20.0	19.7	19.4	19.1	18.9	18.4	18.0	17.6	17.3	16.9	16.6	16.2	15.9	15.6	15.3	3
4	20.6	20.3	20.0	19.7	19.4	19.2	18.7	18.3	17.9	17.5	17.2	16.8	16.5	16.2	15.8	15.5	4
5	20.9	20.6	20.3	20.0	19.7	19.5	19.0	18.6	18.2	17.8	17.4	17.1	16.7	16.4	16.1	15.8	5
6	21.3	20.9	20.6	20.4	20.1	19.8	19.3	18.9	18.5	18.1	17.7	17.4	17.0	16.7	16.4	16.1	6
7	21.6	21.3	21.0	20.7	20.4	20.1	19.7	19.2	18.8	18.4	18.0	17.7	17.3	17.0	16.7	16.3	7
8	22.0	21.7	21.4	21.1	20.8	20.5	20.0	19.6	19.2	18.8	18.4	18.0	17.6	17.3	17.0	16.6	8
9	22.4	22.1	21.8	21.4	21.1	20.9	20.4	19.9	19.5	19.1	18.7	18.3	18.0	17.6	17.3	17.0	9
50	22.8	22.6	22.2	21.8	21.5	21.3	20.8	20.3	19.9	19.5	19.1	18.7	18.3	18.0	17.6	17.3	50
1	23.2	22.9	22.6	22.3	22.0	21.7	21.2	20.7	20.3	19.9	19.4	19.1	18.7	18.3	18.0	17.6	1
2	23.7	23.4	23.0	22.7	22.4	22.1	21.6	21.1	20.7	20.3	19.8	19.4	19.1	18.7	18.3	18.0	2
3	24.2	23.8	23.5	23.2	22.9	22.6	22.1	21.6	21.1	20.7	20.3	19.9	19.5	19.1	18.7	18.4	3
4	24.7	24.3	24.0	23.7	23.4	23.0	22.5	22.1	21.6	21.1	20.7	20.3	19.9	19.5	19.1	18.8	4
5	25.2	24.9	24.5	24.2	23.9	23.6	23.0	22.5	22.1	21.6	21.2	20.8	20.4	20.0	19.6	19.2	5
6	25.8	25.4	25.1	24.7	24.4	24.1	23.6	23.1	22.6	22.1	21.7	21.2	20.8	20.4	20.0	19.7	6
7	26.4	26.0	25.7	25.3	25.0	24.7	24.1	23.6	23.1	22.7	22.2	21.8	21.3	20.9	20.5	20.2	7
8	27.0	26.7	26.3	25.9	25.6	25.3	24.7	24.2	23.7	23.2	22.8	22.3	21.9	21.5	21.1	20.7	8
9	27.7	27.3	26.9	26.6	26.2	25.9	25.3	24.8	24.3	23.8	23.3	22.9	22.4	22.0	21.6	21.2	9
60	28.4	28.0	27.6	27.3	26.9	26.6	26.0	25.5	24.9	24.4	24.0	23.5	23.1	22.6	22.2	21.8	60
1	29.1	28.7	28.4	28.0	27.6	27.3	26.7	26.2	25.6	25.1	24.6	24.2	23.7	23.3	22.8	22.4	1
2	29.9	29.5	29.1	28.8	28.4	28.0	27.5	26.9	26.4	25.8	25.3	24.8	24.4	23.9	23.5	23.1	2
3	30.8	30.4	30.0	29.6	29.2	28.8	28.2	27.7	27.1	26.6	26.1	25.6	25.1	24.7	24.2	23.8	3
4	31.7	31.2	30.8	30.5	30.1	29.7	29.1	28.5	27.9	27.4	26.9	26.4	25.9	25.4	25.0	24.5	4
5	32.6	32.2	31.8	31.4	31.0	30.6	30.0	29.4	28.8	28.3	27.7	27.2	26.7	26.2	25.8	25.3	5
6	33.6	33.2	32.8	32.4	32.0	31.6	30.9	30.3	29.8	29.2	28.7	28.1	27.6	27.1	26.6	26.2	6
7	34.7	34.2	33.8	33.4	33.0	32.6	32.0	31.4	30.8	30.2	29.6	29.1	28.6	28.1	27.6	27.1	7
8	35.8	35.4	34.9	34.5	34.1	33.7	33.1	32.4	31.8	31.2	30.7	30.1	29.6	29.1	28.6	28.1	8
9	37.0	36.6	36.1	35.7	35.3	34.9	34.2	33.6	33.0	32.4	31.8	31.2	30.7	30.2	29.7	29.2	9
70	38.3	37.9	37.4	37.0	36.6	36.2	35.5	34.8	34.2	33.6	33.0	32.4	31.9	31.3	30.8	30.3	70
LAT.	3.70	3.76	3.82	3.88	3.94	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	5.00	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

# TABELA 13.1 TÁBUAS DE AZIMUTE

5.00 → 7.00

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	6.00	6.20	6.40	6.60	6.80		7.00
0°	11.3	11.1	10.9	10.7	10.5	10.3	10.1	10.0	9.8	9.6	9.5	9.2	8.9	8.6	8.4	8.1	0°
5	11.4	11.1	10.9	10.7	10.5	10.3	10.2	10.0	9.8	9.7	9.5	9.2	8.9	8.6	8.4	8.2	5
10	11.5	11.3	11.0	10.8	10.6	10.5	10.3	10.1	9.9	9.8	9.6	9.3	9.0	8.7	8.5	8.3	10
4	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.2	10.1	9.9	9.7	9.4	9.1	8.9	8.6	8.4	4
8	11.9	11.6	11.4	11.2	11.0	10.8	10.6	10.5	10.3	10.1	9.9	9.6	9.3	9.1	8.8	8.5	8
20	12.0	11.8	11.6	11.4	11.1	11.0	10.8	10.6	10.4	10.2	10.1	9.7	9.4	9.2	8.9	8.6	20
2	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.4	10.2	9.9	9.6	9.3	9.0	8.8	2
4	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	10.3	10.0	9.7	9.4	9.1	8.9	4
6	12.5	12.3	12.1	11.9	11.6	11.4	11.2	11.0	10.9	10.7	10.5	10.2	9.9	9.6	9.3	9.0	6
8	12.8	12.5	12.3	12.1	11.8	11.6	11.4	11.2	11.0	10.9	10.7	10.4	10.0	9.7	9.5	9.2	8
30	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.6	10.2	9.9	9.6	9.4	30
1	13.1	12.9	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.0	10.7	10.3	10.0	9.7	9.5	1
2	13.3	13.0	12.8	12.5	12.3	12.1	11.9	11.7	11.5	11.3	11.1	10.8	10.4	10.1	9.8	9.6	2
3	13.4	13.2	12.9	12.7	12.5	12.2	12.0	11.8	11.6	11.4	11.2	10.9	10.6	10.2	9.9	9.7	3
4	13.6	13.3	13.1	12.8	12.6	12.4	12.2	11.9	11.7	11.6	11.4	11.0	10.7	10.4	10.1	9.8	4
5	13.7	13.5	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.7	11.5	11.1	10.8	10.5	10.2	9.9	5
6	13.9	13.6	13.4	13.1	12.9	12.7	12.4	12.2	12.0	11.8	11.6	11.3	10.9	10.6	10.3	10.0	6
7	14.1	13.8	13.5	13.3	13.1	12.8	12.6	12.4	12.2	12.0	11.8	11.4	11.1	10.7	10.4	10.1	7
8	14.2	14.0	13.7	13.5	13.2	13.0	12.8	12.6	12.3	12.1	11.9	11.6	11.2	10.9	10.6	10.3	8
9	14.4	14.2	13.9	13.6	13.4	13.2	12.9	12.7	12.5	12.3	12.1	11.7	11.4	11.0	10.7	10.4	9
40	14.6	14.4	14.1	13.8	13.6	13.4	13.1	12.9	12.7	12.5	12.3	11.9	11.5	11.2	10.9	10.6	40
1	14.8	14.6	14.3	14.0	13.8	13.5	13.3	13.1	12.9	12.7	12.5	12.1	11.7	11.4	11.0	10.7	1
2	15.1	14.8	14.5	14.2	14.0	13.7	13.5	13.3	13.1	12.8	12.6	12.2	11.9	11.5	11.2	10.9	2
3	15.3	15.0	14.7	14.5	14.2	14.0	13.7	13.5	13.3	13.0	12.8	12.4	12.1	11.7	11.4	11.1	3
4	15.5	15.2	15.0	14.7	14.4	14.2	13.9	13.7	13.5	13.3	13.0	12.6	12.3	11.9	11.6	11.2	4
5	15.8	15.5	15.2	14.9	14.7	14.4	14.2	13.9	13.7	13.5	13.3	12.8	12.5	12.1	11.7	11.4	5
6	16.1	15.8	15.5	15.2	14.9	14.7	14.4	14.2	13.9	13.7	13.5	13.1	12.7	12.3	12.0	11.6	6
7	16.3	16.0	15.7	15.5	15.2	14.9	14.7	14.4	14.2	14.0	13.7	13.3	12.9	12.5	12.2	11.8	7
8	16.6	16.3	16.0	15.7	15.5	15.2	14.9	14.7	14.4	14.2	14.0	13.6	13.1	12.8	12.4	12.1	8
9	17.0	16.6	16.3	16.0	15.8	15.5	15.2	15.0	14.7	14.5	14.3	13.8	13.4	13.0	12.6	12.3	9
50	17.3	17.0	16.7	16.4	16.1	15.8	15.5	15.3	15.0	14.8	14.5	14.1	13.7	13.3	12.9	12.5	50
1	17.6	17.3	17.0	16.7	16.4	16.1	15.8	15.6	15.3	15.1	14.8	14.4	13.9	13.5	13.2	12.8	1
2	18.0	17.7	17.3	17.0	16.7	16.5	16.2	15.9	15.6	15.4	15.1	14.7	14.2	13.8	13.4	13.1	2
3	18.4	18.0	17.7	17.4	17.1	16.8	16.5	16.3	16.0	15.7	15.5	15.0	14.6	14.1	13.7	13.4	3
4	18.8	18.4	18.1	17.8	17.5	17.2	16.9	16.6	16.3	16.1	15.8	15.3	14.9	14.5	14.0	13.7	4
5	19.2	18.9	18.5	18.2	17.9	17.6	17.3	17.0	16.7	16.5	16.2	15.7	15.2	14.8	14.4	14.0	5
6	19.7	19.3	19.0	18.6	18.3	18.0	17.7	17.4	17.1	16.9	16.6	16.1	15.6	15.2	14.7	14.3	6
7	20.2	19.8	19.4	19.1	18.8	18.5	18.2	17.9	17.6	17.3	17.0	16.5	16.0	15.5	15.1	14.7	7
8	20.7	20.3	19.9	19.6	19.3	18.9	18.6	18.3	18.0	17.7	17.5	16.9	16.4	16.0	15.5	15.1	8
9	21.2	20.8	20.5	20.1	19.8	19.4	19.1	18.8	18.5	18.2	17.9	17.4	16.9	16.4	15.9	15.5	9
60	21.8	21.4	21.0	20.7	20.3	20.0	19.7	19.3	19.0	18.7	18.4	17.9	17.4	16.9	16.4	15.9	60
1	22.4	22.0	21.6	21.3	20.9	20.6	20.2	19.9	19.6	19.3	19.0	18.4	17.9	17.4	16.9	16.4	1
2	23.1	22.7	22.3	21.9	21.5	21.2	20.8	20.5	20.2	19.9	19.5	19.0	18.4	17.9	17.4	16.9	2
3	23.8	23.4	23.0	22.6	22.2	21.8	21.5	21.1	20.8	20.5	20.2	19.6	19.0	18.5	17.9	17.5	3
4	24.5	24.1	23.7	23.3	22.9	22.5	22.2	21.8	21.5	21.1	20.8	20.2	19.6	19.1	18.5	18.0	4
5	25.3	24.9	24.5	24.1	23.7	23.3	22.9	22.5	22.2	21.9	21.5	20.9	20.3	19.7	19.2	18.7	5
6	26.2	25.7	25.3	24.9	24.5	24.1	23.7	23.3	23.0	22.6	22.3	21.6	21.0	20.4	19.9	19.4	6
7	27.1	26.6	26.2	25.8	25.4	25.0	24.6	24.2	23.8	23.5	23.1	22.4	21.8	21.2	20.6	20.1	7
8	28.1	27.6	27.2	26.7	26.3	25.9	25.5	25.1	24.7	24.3	24.0	23.3	22.6	22.0	21.4	20.9	8
9	29.2	28.7	28.2	27.8	27.3	26.9	26.5	26.1	25.7	25.3	24.9	24.2	23.6	22.9	22.3	21.7	9
70	30.3	29.8	29.3	28.9	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.2	24.6	23.9	23.3	22.7	70

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**7.00 → 10.5**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	7.00	7.20	7.40	7.60	7.80	8.00	8.20	8.40	8.60	8.80	9.00	9.30	9.60	9.90	10.2		10.5
0	8.1	7.9	7.7	7.5	7.3	7.1	7.0	6.8	6.6	6.5	6.3	6.1	5.9	5.8	5.6	5.4	0
5	8.2	7.9	7.7	7.5	7.3	7.2	7.0	6.8	6.7	6.5	6.4	6.2	6.0	5.8	5.6	5.5	5
10	8.3	8.0	7.8	7.6	7.4	7.2	7.1	6.9	6.7	6.6	6.4	6.2	6.0	5.9	5.7	5.5	10
4	8.4	8.1	7.9	7.7	7.5	7.3	7.2	7.0	6.8	6.7	6.5	6.3	6.1	5.9	5.8	5.6	4
8	8.5	8.3	8.1	7.9	7.7	7.5	7.3	7.1	7.0	6.8	6.7	6.5	6.3	6.1	5.9	5.7	8
20	8.6	8.4	8.2	8.0	7.8	7.6	7.4	7.2	7.1	6.9	6.7	6.5	6.3	6.1	6.0	5.8	20
2	8.8	8.5	8.3	8.1	7.9	7.7	7.5	7.3	7.1	7.0	6.8	6.6	6.4	6.2	6.0	5.9	2
4	8.9	8.6	8.4	8.2	8.0	7.8	7.6	7.4	7.3	7.1	6.9	6.7	6.5	6.3	6.1	6.0	4
6	9.0	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.4	7.2	7.0	6.8	6.6	6.4	6.2	6.0	6
8	9.2	8.9	8.7	8.5	8.3	8.1	7.9	7.7	7.5	7.3	7.2	6.9	6.7	6.5	6.3	6.2	8
30	9.4	9.1	8.9	8.6	8.4	8.2	8.0	7.8	7.6	7.5	7.3	7.1	6.9	6.7	6.5	6.3	30
1	9.5	9.2	9.0	8.7	8.5	8.3	8.1	7.9	7.7	7.6	7.4	7.2	6.9	6.7	6.5	6.3	1
2	9.6	9.3	9.1	8.8	8.6	8.4	8.2	8.0	7.8	7.6	7.5	7.2	7.0	6.8	6.6	6.4	2
3	9.7	9.4	9.2	8.9	8.7	8.5	8.3	8.1	7.9	7.7	7.5	7.3	7.1	6.9	6.7	6.5	3
4	9.8	9.5	9.3	9.0	8.8	8.6	8.4	8.2	8.0	7.8	7.6	7.4	7.2	6.9	6.7	6.6	4
5	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	8.1	7.9	7.7	7.5	7.2	7.0	6.8	6.6	5
6	10.0	9.7	9.5	9.2	9.0	8.8	8.6	8.4	8.2	8.0	7.8	7.6	7.3	7.1	6.9	6.7	6
7	10.1	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	8.1	7.9	7.7	7.4	7.2	7.0	6.8	7
8	10.3	10.0	9.7	9.5	9.2	9.0	8.8	8.6	8.4	8.2	8.0	7.8	7.5	7.3	7.1	6.9	8
9	10.4	10.1	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	8.1	7.9	7.6	7.4	7.2	7.0	9
40	10.6	10.3	10.0	9.7	9.5	9.3	9.0	8.8	8.6	8.4	8.3	8.0	7.7	7.5	7.3	7.1	40
1	10.7	10.4	10.2	9.9	9.6	9.4	9.2	9.0	8.8	8.6	8.4	8.1	7.9	7.6	7.4	7.2	1
2	10.9	10.6	10.3	10.0	9.8	9.5	9.3	9.1	8.9	8.7	8.5	8.2	8.0	7.7	7.5	7.3	2
3	11.1	10.8	10.5	10.2	9.9	9.7	9.5	9.2	9.0	8.8	8.6	8.4	8.1	7.9	7.6	7.4	3
4	11.2	10.9	10.6	10.4	10.1	9.9	9.6	9.4	9.2	9.0	8.8	8.5	8.2	8.0	7.8	7.5	4
5	11.4	11.1	10.8	10.5	10.3	10.0	9.8	9.6	9.3	9.1	8.9	8.6	8.4	8.1	7.9	7.7	5
6	11.6	11.3	11.0	10.7	10.5	10.2	10.0	9.7	9.5	9.3	9.1	8.8	8.5	8.3	8.0	7.8	6
7	11.8	11.5	11.2	10.9	10.6	10.4	10.1	9.9	9.7	9.5	9.3	9.0	8.7	8.4	8.2	7.9	7
8	12.1	11.7	11.4	11.1	10.8	10.6	10.3	10.1	9.9	9.6	9.4	9.1	8.8	8.6	8.3	8.1	8
9	12.3	12.0	11.6	11.3	11.1	10.8	10.5	10.3	10.1	9.8	9.6	9.3	9.0	8.8	8.5	8.3	9
50	12.5	12.2	11.9	11.6	11.3	11.0	10.7	10.5	10.3	10.0	9.8	9.5	9.2	8.9	8.7	8.4	50
1	12.8	12.4	12.1	11.8	11.5	11.2	11.0	10.7	10.5	10.2	10.0	9.7	9.4	9.1	8.9	8.6	1
2	13.1	12.7	12.4	12.1	11.8	11.5	11.2	10.9	10.7	10.5	10.2	9.9	9.6	9.3	9.0	8.8	2
3	13.4	13.0	12.7	12.3	12.0	11.7	11.5	11.2	10.9	10.7	10.5	10.1	9.8	9.5	9.3	9.0	3
4	13.7	13.3	12.9	12.6	12.3	12.0	11.7	11.4	11.2	10.9	10.7	10.4	10.0	9.8	9.5	9.2	4
5	14.0	13.6	13.3	12.9	12.6	12.3	12.0	11.7	11.5	11.2	11.0	10.6	10.3	10.0	9.7	9.4	5
6	14.3	13.9	13.6	13.2	12.9	12.6	12.3	12.0	11.7	11.5	11.2	10.9	10.6	10.2	9.9	9.7	6
7	14.7	14.3	13.9	13.6	13.2	12.9	12.6	12.3	12.1	11.8	11.5	11.2	10.8	10.5	10.2	9.9	7
8	15.1	14.7	14.3	13.9	13.6	13.3	13.0	12.7	12.4	12.1	11.8	11.5	11.1	10.8	10.5	10.2	8
9	15.5	15.1	14.7	14.3	14.0	13.6	13.3	13.0	12.7	12.4	12.2	11.8	11.4	11.1	10.8	10.5	9
60	15.9	15.5	15.1	14.7	14.4	14.0	13.7	13.4	13.1	12.8	12.5	12.1	11.8	11.4	11.1	10.8	60
1	16.4	16.0	15.6	15.2	14.8	14.5	14.1	13.8	13.5	13.2	12.9	12.5	12.1	11.8	11.4	11.1	1
2	16.9	16.5	16.1	15.7	15.3	14.9	14.6	14.2	13.9	13.6	13.3	12.9	12.5	12.1	11.8	11.5	2
3	17.5	17.0	16.6	16.2	15.8	15.4	15.0	14.7	14.4	14.1	13.8	13.3	12.9	12.5	12.2	11.8	3
4	18.0	17.6	17.1	16.7	16.3	15.9	15.5	15.2	14.9	14.5	14.2	13.8	13.4	13.0	12.6	12.3	4
5	18.7	18.2	17.7	17.3	16.9	16.5	16.1	15.7	15.4	15.1	14.7	14.3	13.8	13.4	13.1	12.7	5
6	19.4	18.9	18.4	17.9	17.5	17.1	16.7	16.3	16.0	15.6	15.3	14.8	14.4	13.9	13.6	13.2	6
7	20.1	19.6	19.1	18.6	18.2	17.7	17.3	16.9	16.6	16.2	15.9	15.4	14.9	14.5	14.1	13.7	7
8	20.9	20.3	19.8	19.4	18.9	18.5	18.0	17.6	17.2	16.9	16.5	16.0	15.5	15.1	14.7	14.3	8
9	21.7	21.2	20.7	20.2	19.7	19.2	18.8	18.4	18.0	17.6	17.2	16.7	16.2	15.7	15.3	14.9	9
70	22.7	22.1	21.6	21.0	20.5	20.1	19.6	19.2	18.8	18.4	18.0	17.5	16.9	16.5	16.0	15.6	70
LAT.	7.00	7.20	7.40	7.60	7.80	8.00	8.20	8.40	8.60	8.80	9.00	9.30	9.60	9.90	10.2	10.5	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se hl 000° → 180° o azimute é dos quadrantes W  
Se hl 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**10.5 → 20.0**

LAT. (OU LATITUDE DE PARTIDA)	C																LAT. (OU LATITUDE DE PARTIDA)
	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	19.0	20.0	
<b>0</b>	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.1	3.9	3.8	3.7	3.6	3.4	3.2	3.0	2.9	<b>0</b>
<b>5</b>	5.5	5.2	5.0	4.8	4.6	4.4	4.3	4.1	4.0	3.8	3.7	3.6	3.4	3.2	3.0	2.9	<b>5</b>
<b>10</b>	5.5	5.3	5.0	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.7	3.6	3.4	3.2	3.1	2.9	<b>10</b>
<b>4</b>	5.6	5.4	5.1	4.9	4.7	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.3	3.1	2.9	<b>4</b>
<b>8</b>	5.7	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.1	4.0	3.9	3.8	3.5	3.3	3.2	3.0	<b>8</b>
<b>20</b>	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.6	3.4	3.2	3.0	<b>20</b>
<b>2</b>	5.9	5.6	5.4	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.6	3.4	3.2	3.1	<b>2</b>
<b>4</b>	6.0	5.7	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.9	3.7	3.5	3.3	3.1	<b>4</b>
<b>6</b>	6.0	5.8	5.5	5.3	5.1	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.7	3.5	3.4	3.2	<b>6</b>
<b>8</b>	6.2	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.0	3.8	3.6	3.4	3.2	<b>8</b>
<b>30</b>	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	3.9	3.7	3.5	3.3	<b>30</b>
<b>1</b>	6.3	6.1	5.8	5.6	5.3	5.1	4.9	4.8	4.6	4.4	4.3	4.2	3.9	3.7	3.5	3.3	<b>1</b>
<b>2</b>	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.8	4.6	4.5	4.4	4.2	4.0	3.7	3.6	3.4	<b>2</b>
<b>3</b>	6.5	6.2	5.9	5.7	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.0	3.8	3.6	3.4	<b>3</b>
<b>4</b>	6.6	6.3	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.4	4.3	4.1	3.8	3.6	3.5	<b>4</b>
<b>5</b>	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.4	4.1	3.9	3.7	3.5	<b>5</b>
<b>6</b>	6.7	6.4	6.1	5.9	5.6	5.4	5.2	5.0	4.9	4.7	4.6	4.4	4.2	3.9	3.7	3.5	<b>6</b>
<b>7</b>	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	4.9	4.8	4.6	4.5	4.2	4.0	3.8	3.6	<b>7</b>
<b>8</b>	6.9	6.6	6.3	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.7	4.5	4.3	4.0	3.8	3.6	<b>8</b>
<b>9</b>	7.0	6.7	6.4	6.1	5.9	5.7	5.4	5.3	5.1	4.9	4.7	4.6	4.3	4.1	3.9	3.7	<b>9</b>
<b>40</b>	7.1	6.8	6.5	6.2	6.0	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.4	4.1	3.9	3.7	<b>40</b>
<b>1</b>	7.2	6.9	6.6	6.3	6.1	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.5	4.2	4.0	3.8	<b>1</b>
<b>2</b>	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.5	4.3	4.1	3.8	<b>2</b>
<b>3</b>	7.4	7.1	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.6	4.3	4.1	3.9	<b>3</b>
<b>4</b>	7.5	7.2	6.9	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	5.0	4.7	4.4	4.2	4.0	<b>4</b>
<b>5</b>	7.7	7.3	7.0	6.7	6.5	6.2	6.0	5.8	5.6	5.4	5.2	5.1	4.8	4.5	4.3	4.0	<b>5</b>
<b>6</b>	7.8	7.5	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.1	4.8	4.6	4.3	4.1	<b>6</b>
<b>7</b>	7.9	7.6	7.3	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.2	4.9	4.7	4.4	4.2	<b>7</b>
<b>8</b>	8.1	7.7	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.5	5.3	5.0	4.7	4.5	4.3	<b>8</b>
<b>9</b>	8.3	7.9	7.6	7.2	7.0	6.7	6.4	6.2	6.0	5.8	5.6	5.4	5.1	4.8	4.6	4.4	<b>9</b>
<b>50</b>	8.4	8.0	7.7	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.7	5.6	5.2	4.9	4.7	4.4	<b>50</b>
<b>1</b>	8.6	8.2	7.9	7.5	7.2	7.0	6.7	6.5	6.3	6.0	5.9	5.7	5.3	5.0	4.8	4.5	<b>1</b>
<b>2</b>	8.8	8.4	8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.8	5.5	5.2	4.9	4.6	<b>2</b>
<b>3</b>	9.0	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.5	6.3	6.1	5.9	5.6	5.3	5.0	4.7	<b>3</b>
<b>4</b>	9.2	8.8	8.4	8.1	7.8	7.5	7.2	6.9	6.7	6.5	6.3	6.1	5.7	5.4	5.1	4.9	<b>4</b>
<b>5</b>	9.4	9.0	8.6	8.3	7.9	7.6	7.4	7.1	6.9	6.6	6.4	6.2	5.9	5.5	5.2	5.0	<b>5</b>
<b>6</b>	9.7	9.2	8.8	8.5	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.0	5.7	5.4	5.1	<b>6</b>
<b>7</b>	9.9	9.5	9.1	8.7	8.4	8.0	7.7	7.5	7.2	7.0	6.8	6.5	6.2	5.8	5.5	5.2	<b>7</b>
<b>8</b>	10.2	9.7	9.3	8.9	8.6	8.3	8.0	7.7	7.4	7.2	6.9	6.7	6.3	6.0	5.7	5.4	<b>8</b>
<b>9</b>	10.5	10.0	9.6	9.2	8.8	8.5	8.2	7.9	7.6	7.4	7.1	6.9	6.5	6.2	5.8	5.5	<b>9</b>
<b>60</b>	10.8	10.3	9.9	9.5	9.1	8.7	8.4	8.1	7.9	7.6	7.4	7.1	6.7	6.3	6.0	5.7	<b>60</b>
<b>1</b>	11.1	10.6	10.2	9.8	9.4	9.0	8.7	8.4	8.1	7.8	7.6	7.3	6.9	6.5	6.2	5.9	<b>1</b>
<b>2</b>	11.5	11.0	10.5	10.1	9.7	9.3	9.0	8.7	8.4	8.1	7.8	7.6	7.1	6.7	6.4	6.1	<b>2</b>
<b>3</b>	11.8	11.3	10.8	10.4	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.8	7.4	7.0	6.6	6.3	<b>3</b>
<b>4</b>	12.3	11.7	11.2	10.8	10.3	10.0	9.6	9.3	8.9	8.6	8.4	8.1	7.6	7.2	6.8	6.5	<b>4</b>
<b>5</b>	12.7	12.1	11.6	11.2	10.7	10.3	9.9	9.6	9.3	9.0	8.7	8.4	7.9	7.5	7.1	6.7	<b>5</b>
<b>6</b>	13.2	12.6	12.1	11.6	11.1	10.7	10.3	10.0	9.6	9.3	9.0	8.7	8.2	7.8	7.4	7.0	<b>6</b>
<b>7</b>	13.7	13.1	12.5	12.0	11.6	11.1	10.7	10.4	10.0	9.7	9.4	9.1	8.6	8.1	7.7	7.3	<b>7</b>
<b>8</b>	14.3	13.6	13.1	12.5	12.1	11.6	11.2	10.8	10.4	10.1	9.8	9.5	8.9	8.4	8.0	7.6	<b>8</b>
<b>9</b>	14.9	14.2	13.6	13.1	12.6	12.1	11.7	11.3	10.9	10.5	10.2	9.9	9.3	8.8	8.4	7.9	<b>9</b>
<b>70</b>	15.6	14.9	14.3	13.7	13.2	12.7	12.2	11.8	11.4	11.0	10.7	10.4	9.8	9.2	8.7	8.3	<b>70</b>
LAT.	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	19.0	20.0	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h1 000° → 180° o azimute é dos quadrantes W  
Se h1 180° → 360° o azimute é dos quadrantes E

**TABELA 13.1**  
**TÁBUAS DE AZIMUTE**

**20.0 → 500**

LAT. (OU LATITUDE DE PARTIDA)	C															LAT. (OU LATITUDE DE PARTIDA)	
	20.0	21.0	23.0	25.0	27.0	30.0	33.0	36.0	40.0	45.0	55.0	65.0	80.0	100	150		500
<b>0°</b>	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.6	1.4	1.3	1.0	0.9	0.7	0.6	0.4	0.1	<b>0°</b>
<b>5</b>	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.6	1.4	1.3	1.0	0.9	0.7	0.6	0.4	0.1	<b>5</b>
<b>10</b>	2.9	2.8	2.5	2.3	2.2	1.9	1.8	1.6	1.5	1.3	1.1	0.9	0.7	0.6	0.4	0.1	<b>10</b>
<b>4</b>	2.9	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.5	1.3	1.1	0.9	0.7	0.6	0.4	0.1	<b>4</b>
<b>8</b>	3.0	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.3	1.1	0.9	0.8	0.6	0.4	0.1	<b>8</b>
<b>20</b>	3.0	2.9	2.6	2.4	2.3	2.0	1.8	1.7	1.5	1.4	1.1	0.9	0.8	0.6	0.4	0.1	<b>20</b>
<b>2</b>	3.1	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.5	1.4	1.1	1.0	0.8	0.6	0.4	0.1	<b>2</b>
<b>4</b>	3.1	3.0	2.7	2.5	2.3	2.1	1.9	1.7	1.6	1.4	1.1	1.0	0.8	0.6	0.4	0.1	<b>4</b>
<b>6</b>	3.2	3.0	2.8	2.5	2.4	2.1	1.9	1.8	1.6	1.4	1.2	1.0	0.8	0.6	0.4	0.1	<b>6</b>
<b>8</b>	3.2	3.1	2.8	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6	0.4	0.1	<b>8</b>
<b>30</b>	3.3	3.1	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.2	1.0	0.8	0.7	0.4	0.1	<b>30</b>
<b>1</b>	3.3	3.2	2.9	2.7	2.5	2.2	2.0	1.9	1.7	1.5	1.2	1.0	0.8	0.7	0.4	0.1	<b>1</b>
<b>2</b>	3.4	3.2	2.9	2.7	2.5	2.3	2.0	1.9	1.7	1.5	1.2	1.0	0.8	0.7	0.5	0.1	<b>2</b>
<b>3</b>	3.4	3.2	3.0	2.7	2.5	2.3	2.1	1.9	1.7	1.5	1.2	1.1	0.9	0.7	0.5	0.1	<b>3</b>
<b>4</b>	3.5	3.3	3.0	2.8	2.6	2.3	2.1	1.9	1.7	1.5	1.3	1.1	0.9	0.7	0.5	0.1	<b>4</b>
<b>5</b>	3.5	3.3	3.0	2.8	2.6	2.3	2.1	1.9	1.7	1.6	1.3	1.1	0.9	0.7	0.5	0.1	<b>5</b>
<b>6</b>	3.5	3.4	3.1	2.8	2.6	2.4	2.1	2.0	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.1	<b>6</b>
<b>7</b>	3.6	3.4	3.1	2.9	2.7	2.4	2.2	2.0	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.1	<b>7</b>
<b>8</b>	3.6	3.5	3.2	2.9	2.7	2.4	2.2	2.0	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.1	<b>8</b>
<b>9</b>	3.7	3.5	3.2	2.9	2.7	2.5	2.2	2.0	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.1	<b>9</b>
<b>40</b>	3.7	3.6	3.2	3.0	2.8	2.5	2.3	2.1	1.9	1.7	1.4	1.2	0.9	0.7	0.5	0.1	<b>40</b>
<b>1</b>	3.8	3.6	3.3	3.0	2.8	2.5	2.3	2.1	1.9	1.7	1.4	1.2	0.9	0.8	0.5	0.2	<b>1</b>
<b>2</b>	3.8	3.7	3.3	3.1	2.9	2.6	2.3	2.1	1.9	1.7	1.4	1.2	1.0	0.8	0.5	0.2	<b>2</b>
<b>3</b>	3.9	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0	1.7	1.4	1.2	1.0	0.8	0.5	0.2	<b>3</b>
<b>4</b>	4.0	3.8	3.5	3.2	2.9	2.7	2.4	2.2	2.0	1.8	1.4	1.2	1.0	0.8	0.5	0.2	<b>4</b>
<b>5</b>	4.0	3.9	3.5	3.2	3.0	2.7	2.5	2.2	2.0	1.8	1.5	1.2	1.0	0.8	0.5	0.2	<b>5</b>
<b>6</b>	4.1	3.9	3.6	3.3	3.1	2.7	2.5	2.3	2.1	1.8	1.5	1.3	1.0	0.8	0.5	0.2	<b>6</b>
<b>7</b>	4.2	4.0	3.6	3.4	3.1	2.8	2.5	2.3	2.1	1.9	1.5	1.3	1.1	0.8	0.6	0.2	<b>7</b>
<b>8</b>	4.3	4.1	3.7	3.4	3.2	2.9	2.6	2.4	2.1	1.9	1.6	1.3	1.1	0.9	0.6	0.2	<b>8</b>
<b>9</b>	4.4	4.2	3.8	3.5	3.2	2.9	2.6	2.4	2.2	1.9	1.6	1.3	1.1	0.9	0.6	0.2	<b>9</b>
<b>50</b>	4.4	4.2	3.9	3.6	3.3	3.0	2.7	2.5	2.2	2.0	1.6	1.4	1.1	0.9	0.6	0.2	<b>50</b>
<b>1</b>	4.5	4.3	4.0	3.6	3.4	3.0	2.8	2.5	2.3	2.0	1.7	1.4	1.1	0.9	0.6	0.2	<b>1</b>
<b>2</b>	4.6	4.4	4.0	3.7	3.4	3.1	2.8	2.6	2.3	2.1	1.7	1.4	1.2	0.9	0.6	0.2	<b>2</b>
<b>3</b>	4.7	4.5	4.1	3.8	3.5	3.2	2.9	2.6	2.4	2.1	1.7	1.5	1.2	1.0	0.6	0.2	<b>3</b>
<b>4</b>	4.9	4.6	4.2	3.9	3.6	3.2	3.0	2.7	2.4	2.2	1.8	1.5	1.2	1.0	0.6	0.2	<b>4</b>
<b>5</b>	5.0	4.7	4.3	4.0	3.7	3.3	3.0	2.8	2.5	2.2	1.8	1.5	1.2	1.0	0.7	0.2	<b>5</b>
<b>6</b>	5.1	4.9	4.4	4.1	3.8	3.4	3.1	2.8	2.6	2.3	1.9	1.6	1.3	1.0	0.7	0.2	<b>6</b>
<b>7</b>	5.2	5.0	4.6	4.2	3.9	3.5	3.2	2.9	2.6	2.3	1.9	1.6	1.3	1.1	0.7	0.2	<b>7</b>
<b>8</b>	5.4	5.1	4.7	4.3	4.0	3.6	3.3	3.0	2.7	2.4	2.0	1.7	1.4	1.1	0.7	0.2	<b>8</b>
<b>9</b>	5.5	5.3	4.8	4.4	4.1	3.7	3.4	3.1	2.8	2.5	2.0	1.7	1.4	1.1	0.7	0.2	<b>9</b>
<b>60</b>	5.7	5.4	5.0	4.6	4.2	3.8	3.5	3.2	2.9	2.5	2.1	1.8	1.4	1.1	0.8	0.2	<b>60</b>
<b>1</b>	5.9	5.6	5.1	4.7	4.4	3.9	3.6	3.3	3.0	2.6	2.1	1.8	1.5	1.2	0.8	0.2	<b>1</b>
<b>2</b>	6.1	5.8	5.3	4.9	4.5	4.1	3.7	3.4	3.0	2.7	2.2	1.9	1.5	1.2	0.8	0.2	<b>2</b>
<b>3</b>	6.3	6.0	5.5	5.0	4.7	4.2	3.8	3.5	3.2	2.8	2.3	1.9	1.6	1.3	0.8	0.3	<b>3</b>
<b>4</b>	6.5	6.2	5.7	5.2	4.8	4.3	4.0	3.6	3.3	2.9	2.4	2.0	1.6	1.3	0.9	0.3	<b>4</b>
<b>5</b>	6.7	6.4	5.9	5.4	5.0	4.5	4.1	3.8	3.4	3.0	2.5	2.1	1.7	1.4	0.9	0.3	<b>5</b>
<b>6</b>	7.0	6.7	6.1	5.6	5.2	4.7	4.3	3.9	3.5	3.1	2.6	2.2	1.8	1.4	0.9	0.3	<b>6</b>
<b>7</b>	7.3	6.9	6.3	5.8	5.4	4.9	4.4	4.1	3.7	3.3	2.7	2.3	1.8	1.5	1.0	0.3	<b>7</b>
<b>8</b>	7.6	7.2	6.6	6.1	5.6	5.1	4.6	4.2	3.8	3.4	2.8	2.4	1.9	1.5	1.0	0.3	<b>8</b>
<b>9</b>	7.9	7.6	6.9	6.4	5.9	5.3	4.8	4.4	4.0	3.5	2.9	2.5	2.0	1.6	1.1	0.3	<b>9</b>
<b>70</b>	8.3	7.9	7.2	6.7	6.2	5.6	5.1	4.6	4.2	3.7	3.0	2.6	2.1	1.7	1.1	0.3	<b>70</b>
LAT.	20.0	21.0	23.0	25.0	27.0	30.0	33.0	36.0	40.0	45.0	55.0	65.0	80.0	100	150	500	LAT.

Se c (+) o azimute é dos quadrantes do mesmo nome da latitude  
Se c (-) o azimute é dos quadrantes do nome contrário da latitude

Se h| 000° → 180° o azimute é dos quadrantes W  
Se h| 180° → 360° o azimute é dos quadrantes E