Chapter 1

Basic Classes of Functions

Checkpoint Solution

Checkpoint 1.17: Converting between Radians and Degrees

Instruction

(a) Express 210° using radians.

(b) Express $5\pi/3$ rad using degrees.

Solution

(a) The fact that π radians is 180 degrees gives us the conversion factor $\frac{\pi}{180^\circ}\ rad$ which we can use to convert from degrees to radians,

$$210^\circ = 210^\circ \cdot \frac{\pi}{180^\circ}\ rad = \frac{7\pi}{6}\ rad.$$

(b) In the same way as in part (a) we have the conversion factor $\frac{180^\circ}{\pi}$ which we can use to convert from radians to degrees,

$$\frac{11\pi}{6} = \frac{11\pi}{6} \cdot \frac{180^\circ}{\pi} = 330^\circ$$

Answer

(a) $7\pi/6$ radians.

(b) 330°.