

**A2.M.2: Radian Measure 1: Convert between radian and degree measures**

- 1 Express  $15^\circ$  in radian measure.
- 2 Express  $45^\circ$  in radian measure.
- 3 Express  $54^\circ$  in radian measure.
- 4 Express  $72^\circ$  in radian measure.
- 5 Express  $75^\circ$  in radian measure.
- 6 Express  $105^\circ$  in radian measure.
- 7 Express  $150^\circ$  in radian measure.
- 8 Express  $160^\circ$  in radian measure.
- 9 Express  $198^\circ$  in radian measure.
- 10 Find, to the *nearest tenth*, the radian measure of  $216^\circ$ .
- 11 Express  $220^\circ$  in radian measure.
- 12 Express  $225^\circ$  in radian measure.
- 13 What is  $235^\circ$ , expressed in radian measure?
  - 1)  $235\pi$
  - 2)  $\frac{\pi}{235}$
  - 3)  $\frac{36\pi}{47}$
  - 4)  $\frac{47\pi}{36}$
- 14 Express  $240^\circ$  in radian measure.
- 15 Express  $260^\circ$  in radian measure.
- 16 Express  $300^\circ$  in radian measure.
- 17 Express  $315^\circ$  in radian measure.
- 18 Express  $330^\circ$  in radian measure.
- 19 Express  $405^\circ$  in radian measure.
- 20 Express  $450^\circ$  in radian measure.
- 21 What is the radian measure of an angle whose measure is  $-420^\circ$ ?
  - 1)  $-\frac{7\pi}{3}$
  - 2)  $-\frac{7\pi}{6}$
  - 3)  $\frac{7\pi}{6}$
  - 4)  $\frac{7\pi}{3}$
- 22 Express  $-130^\circ$  in radian measure, to the *nearest hundredth*.

**A2.M.2: Radian Measure 1: Convert between radian and degree measures****Answer Section**

1 ANS:

$$\frac{\pi}{12}$$

REF: 068804siii

2 ANS:

$$\frac{\pi}{4}$$

REF: 060207siii

3 ANS:

$$\frac{3\pi}{10}$$

REF: 069407siii

4 ANS:

$$\frac{2\pi}{5}$$

REF: 068001siii

5 ANS:

$$\frac{5\pi}{12}$$

REF: 019908siii

6 ANS:

$$\frac{7\pi}{12}$$

REF: 068601siii

7 ANS:

$$\frac{5\pi}{6}$$

REF: 088503siii

8 ANS:

$$\frac{8\pi}{9}$$

REF: 089703siii

9 ANS:

$$\frac{11\pi}{10}$$

REF: 080103siii

10 ANS:

$$216\left(\frac{\pi}{180}\right) \approx 3.8$$

REF: 061232a2

11 ANS:

$$\frac{11\pi}{9}$$

REF: 089904siii

12 ANS:

$$\frac{5\pi}{4}$$

REF: 019402siii

13 ANS: 4

$$235 \cdot \frac{\pi}{180} = \frac{235\pi}{180} = \frac{47\pi}{36}$$

REF: 080704b

14 ANS:

$$\frac{4\pi}{3}$$

REF: 010304siii

15 ANS:

$$\frac{13\pi}{9}$$

REF: 018401siii

16 ANS:

$$\frac{5\pi}{3}$$

REF: 060101siii

17 ANS:

$$\frac{7\pi}{4}$$

REF: 089505siii

18 ANS:

$$\frac{11\pi}{6}$$

REF: 068405siii

19 ANS:

$$\frac{9\pi}{4}$$

REF: 069906siii

20 ANS:

$$\frac{5\pi}{2}$$

REF: 019502siii

21 ANS: 1

$$-420\left(\frac{\pi}{180}\right) = -\frac{7\pi}{3}$$

REF: 081002a2

22 ANS:

$$-130 \cdot \frac{\pi}{180} \approx -2.27$$

REF: 011632a2