4-2 Degrees and Radians

Write each degree measure in radians as a multiple of π and each radian measure in degrees.

10. $30°$

ANSWER:

$\dfrac{\pi}{6}$

11. $225°$

ANSWER:

$\dfrac{5\pi}{4}$

12. $-165°$

ANSWER:

$-\dfrac{11\pi}{12}$

13. $-45°$

ANSWER:

$-\dfrac{\pi}{4}$

14. $\dfrac{2\pi}{3}$

ANSWER:
120°

15. $\dfrac{5\pi}{2}$

ANSWER:
450°

16. $-\dfrac{\pi}{4}$

ANSWER:
−45°

17. $-\dfrac{7\pi}{6}$

ANSWER:
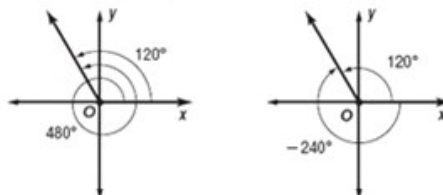−210°

Identify all angles that are coterminal with the given angle. Then find and draw one positive and one negative angle coterminal with the given angle.
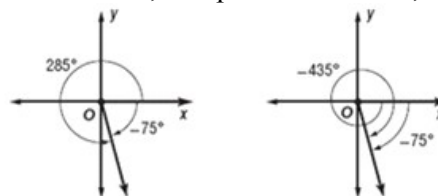
18. $120°$

ANSWER:

$120° + 360n°$; Sample answer: 480°, −240°

19. $-75°$

ANSWER:

$-75° + 360n°$; Sample answer: 285°, −435°

20. $225°$

ANSWER:

$225° + 360n°$; Sample answer: 585°, −135°
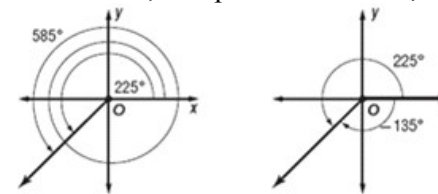
21. $-150°$

ANSWER:
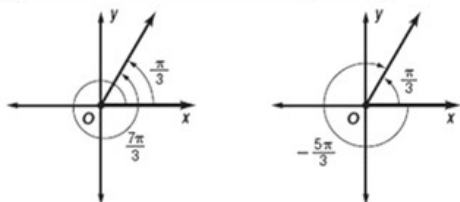
$-150° + 360n°$; Sample answer: 210°, −510°
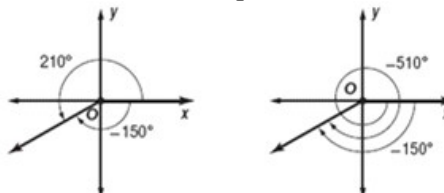
4-2 Degrees and Radians
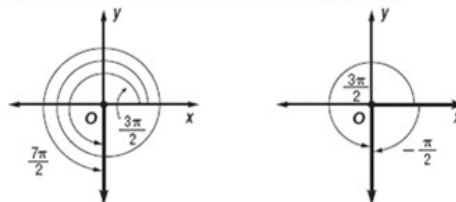
22. $\dfrac{\pi}{3}$

ANSWER:

$\dfrac{\pi}{3} + 2n\pi$; Sample answer: $\dfrac{7\pi}{3}, -\dfrac{5\pi}{3}$
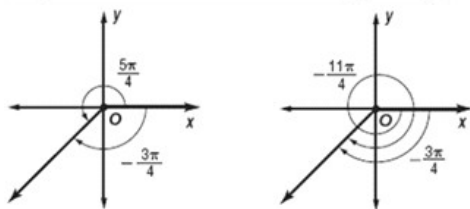
25. $\dfrac{3\pi}{2}$

ANSWER:

$\dfrac{3\pi}{2} + 2n\pi$; Sample answer: $\dfrac{7\pi}{2}, -\dfrac{\pi}{2}$

23. $-\dfrac{3\pi}{4}$

ANSWER:

$-\dfrac{3\pi}{4} + 2n\pi$; Sample answer: $\dfrac{5\pi}{4}, -\dfrac{11\pi}{4}$

24. $-\dfrac{\pi}{12}$

ANSWER:

$-\dfrac{\pi}{12} + 2n\pi$; Sample answer: $\dfrac{23\pi}{12}, -\dfrac{25\pi}{12}$