Name_____

Arc Length and Sector Area

Date_____ Period_____

Find the length of each arc. Round your answers to the nearest tenth.

1)

2)

3)

4)

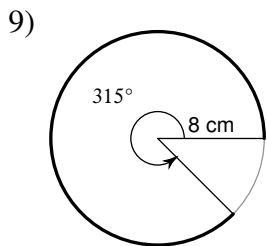5) $r = 18$ cm, $\theta = 60°$

6) $r = 16$ m, $\theta = 75°$

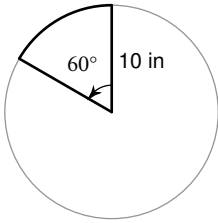7) $r = 9$ ft, $\theta = \dfrac{7\pi}{4}$

8) $r = 14$ ft, $\theta = \dfrac{19\pi}{12}$

Find the length of each arc. Do not round.
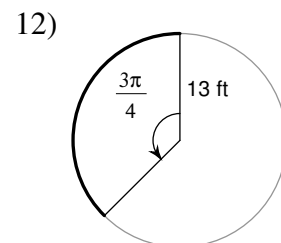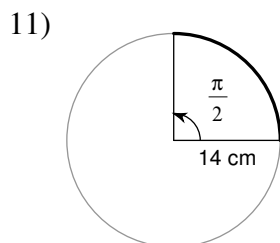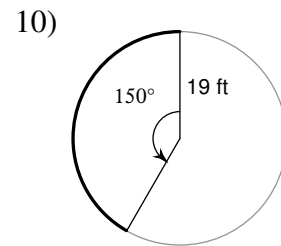
9)

10)

11)

12)

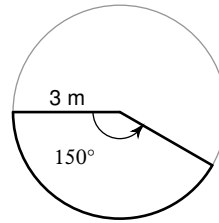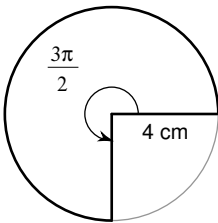**Find the area of each sector. Round your answers to the nearest tenth.**

13)

$60°$ | 10 in
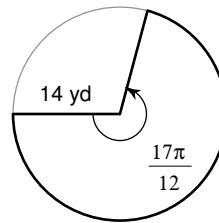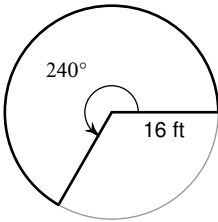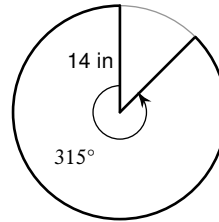
14)

3 m

$150°$

15)

$\frac{3\pi}{2}$

4 cm

16)

14 yd

$\frac{17\pi}{12}$

Find the area of each sector. Do not round.

17)

$240°$

16 ft

18)

14 in

$315°$

19)

$\frac{3\pi}{2}$

14 cm

20)

$\frac{19\pi}{12}$

12 ft
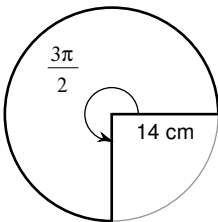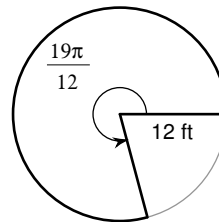
21) $r = 10$ mi, $\theta = \dfrac{\pi}{2}$

22) $r = 12$ yd, $\theta = \dfrac{5\pi}{3}$

23) $r = 7$ km, $\theta = 60°$

24) $r = 7$ mi, $\theta = 225°$

Name_____

Arc Length and Sector Area

Date_____ Period_____

Find the length of each arc. Round your answers to the nearest tenth.

1)

11 ft

315°

60.5 ft

2)

270°

13 ft

61.3 ft

3)

16 ft

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

75.4 ft

4)

$\dfrac{\pi}{6}$ 13 in
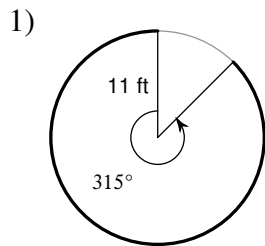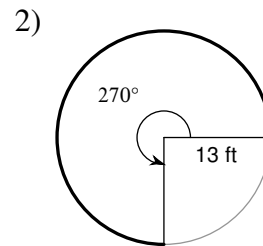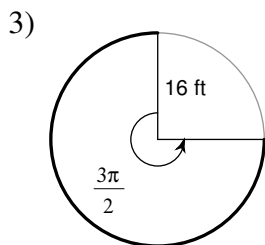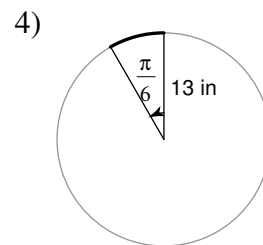
6.8 in

5) $r = 18$ cm, $\theta = 60°$

18.8 cm

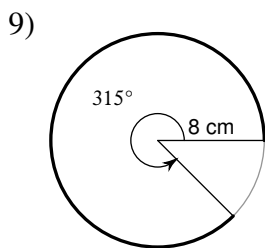6) $r = 16$ m, $\theta = 75°$

20.9 m

7) $r = 9$ ft, $\theta = \dfrac{7\pi}{4}$

49.5 ft

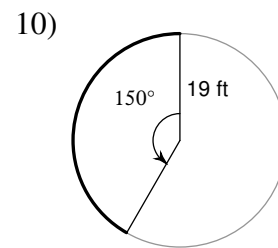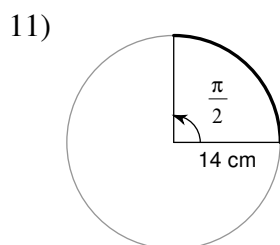8) $r = 14$ ft, $\theta = \dfrac{19\pi}{12}$
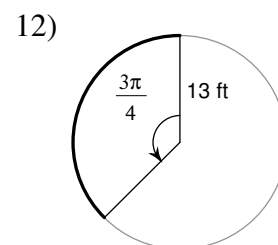
69.6 ft

Find the length of each arc. Do not round.

9)

315°

8 cm

14π cm

10)

150° 19 ft

$\dfrac{95\pi}{6}$ ft

11)

$\dfrac{\pi}{2}$

14 cm

7π cm

12)

$\dfrac{3\pi}{4}$ 13 ft

$\dfrac{39\pi}{4}$ ft

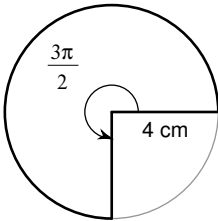**Find the area of each sector. Round your answers to the nearest tenth.**

13)

60° 10 in

52.4 in²

14)

3 m

150°

11.8 m²

15)

$\frac{3\pi}{2}$

4 cm

37.7 cm²

16)

14 yd

$\frac{17\pi}{12}$
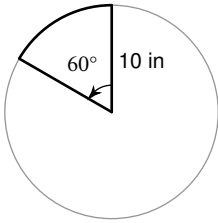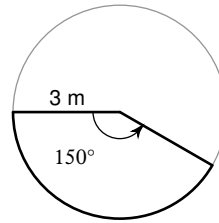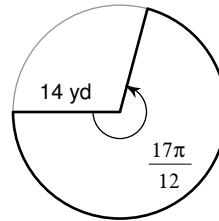
436.2 yd²

Find the area of each sector. Do not round.

17)

240°

16 ft

$\dfrac{512\pi}{3}$ ft²

18)

14 in

315°

$\dfrac{343\pi}{2}$ in²

19)

$\frac{3\pi}{2}$

14 cm

147π cm²

20)

$\frac{19\pi}{12}$

12 ft

114π ft²

21) $r = 10$ mi, $\theta = \dfrac{\pi}{2}$

25π mi²
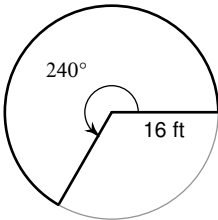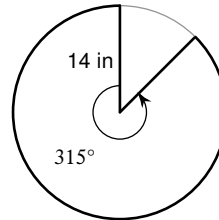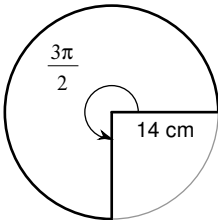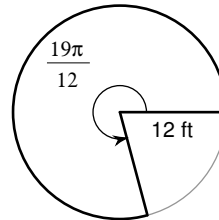
22) $r = 12$ yd, $\theta = \dfrac{5\pi}{3}$

120π yd²

23) $r = 7$ km, $\theta = 60°$

$\dfrac{49\pi}{6}$ km²

24) $r = 7$ mi, $\theta = 225°$

$\dfrac{245\pi}{8}$ mi²

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