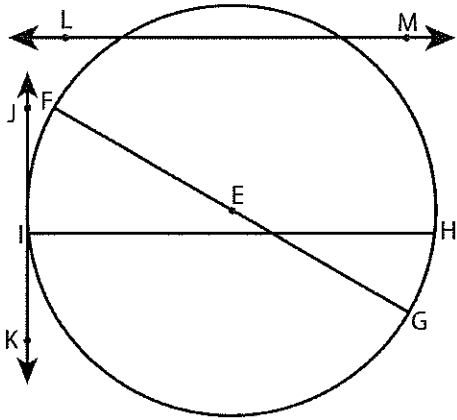


Parts of Circle

Moderate: S1

Identify the parts of each circle.

1)

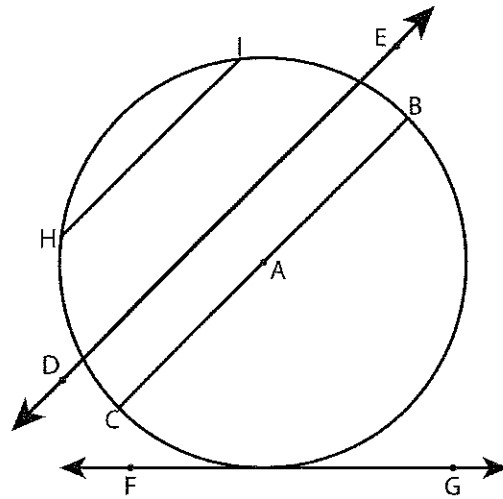


Circle = E Chord = HI, FG

Radius = EF, EG Tangent = JK

Diameter = FG Secant = LM

2)

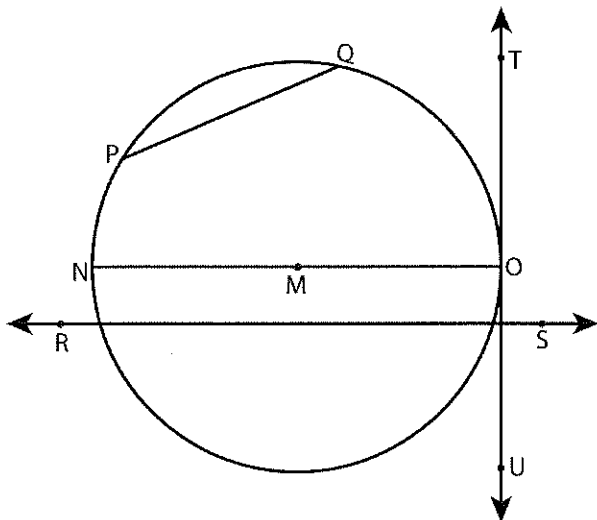


Circle = A Chord = BC, HI

Radius = AB, AC Tangent = FG

Diameter = BC Secant = DE

3)

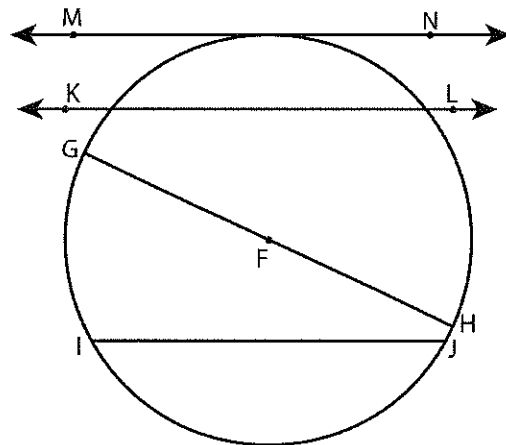


Circle = M Chord = PQ, NO

Radius = MN, MO Tangent = TU

Diameter = NO Secant = RS

4)



Circle = F Chord = GH, IJ

Radius = FG, FH Tangent = MN

Diameter = GH Secant = KL

7-2

Practice: Word Problems

Circumference and Area of Circles

1. FOUNTAINS The circular fountain in front of the courthouse has a radius of 9.4 feet. What is the circumference of the fountain? Round to the nearest tenth.

$$2\pi r$$

$$18.8\pi \approx 59.1 \text{ FEET}$$

2. PETS A dog is leashed to a point in the center of a large yard, so the area the dog is able to explore is circular. The leash is 20 feet long. What is the area of the region the dog is able to explore? Round to the nearest tenth.

$$\pi r^2$$

$$400\pi \approx 1256.6 \text{ FT}^2$$

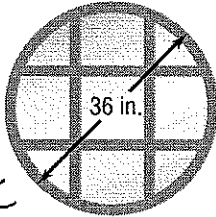
3. GARDENING A flowerpot has a circular base with a diameter of 27 centimeters. Find the circumference of the base of the flowerpot. Round to the nearest tenth.

$$\pi d$$

$$27\pi \approx 84.8 \text{ cm}$$

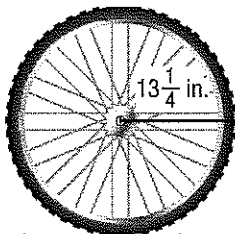
4. WINDOWS Find the area of the window shown below. Round to the nearest tenth.

πr^2
 $r = 18$
 $324\pi \approx$



1017.9 IN^2

5. BICYCLES A bicycle tire has a radius of $13\frac{1}{4}$ inches. How far will the bicycle travel in 40 rotations of the tire? Round to the nearest tenth.



$$40(2\pi r) \Rightarrow 40(26.5\pi)$$

$$\approx 3330.1 \text{ INCHES}$$

6. LANDSCAPING Joni has a circular garden with a diameter of $14\frac{1}{2}$ feet. If she uses 2 teaspoons of fertilizer for every 25 square feet of garden, how much fertilizer will Joni need for her entire garden? Round to the nearest tenth.

$$d = 14.5, r = 7.25$$

$$A = \pi 7.25^2, A \approx 52.5225\pi$$

$$A \approx 165.1 \text{ FT}^2$$

$$\frac{165.1 \text{ FT}^2}{25 \text{ FT}^2} = \frac{x \text{ TSP}}{2 \text{ TSP}} = 13.2 \text{ TSP}$$

Math Word Problems Warm-ups: Circumference and Area of Circles

Name/Date _____

Circumference and Area of Circles 1

$$C = \pi d$$

$$d = \frac{C}{\pi}$$

A. Trevor needs a new bicycle tire. His tire has a circumference of about 113.04 inches. What is the diameter of his tire?

$$d = \frac{113.04}{\pi} \approx 35.98 \text{ in}$$

B. Gene's frying pan is 13.5 inches in diameter. What is the circumference of his frying pan? $C = \pi 13.5 \approx 42.4$

Name/Date _____

Circumference and Area of Circles 2

$$(L = 24) \text{ DIA}$$

$$(M = \frac{L}{3}) \text{ RAD}$$

$$(S = M + 2) \text{ RAD}$$

A farmer has three silos. The largest silo has a diameter of 24 feet.

The radius of the smallest silo is one-third as big as the diameter of

the largest. The middle-sized silo has a radius that is 2 feet greater

than the radius of the smallest silo. What is the circumference of

each silo? 24π 16π 10π

Name/Date _____

Circumference and Area of Circles 3

A. Brad is putting an 8-foot diameter circular flower garden in his yard. He will put plastic edging along the flowerbed. How many feet of edging will Brad need to enclose his flower garden?

$$8\pi \approx 25.1 \text{ ft}$$

B. How many square feet of land are in Brad's garden?

$$16\pi \text{ ft}^2 \approx 50.3 \text{ ft}^2$$

Name/Date _____

Circumference and Area of Circles 4

$$16\pi - 9\pi$$

A. Kelsey bought a circular rug that is 8 feet in diameter. The rug has a blue border and a red circular center that is 6 feet in diameter. What is the area of the blue border? $7\pi \approx 22 \text{ ft}^2$

B. Macy measures a truck's tire mark for one complete revolution as 100.48 inches long. What is the diameter of the tire?

$$d = \frac{C}{\pi}$$

$$\approx 32 \text{ in}$$

Name/Date _____

Circumference and Area of Circles 5

A. Anna is covering the circular pool with a heavy-duty cover for the winter. The pool has a diameter of 24 feet. The cover extends 12 inches beyond

the edge of the pool, and a rope runs along the edge of the cover to secure the cover in place. What is the area of the cover? $\approx 531 \text{ ft}^2$



What is the length of the rope? $13^2\pi$

$\approx 531 \text{ ft}^2$ $26\pi \approx 82 \text{ ft}$

B. How many square inches greater is the area of a 30-inch circular mirror than an 18-inch circular mirror?

$$\approx 452.4 \text{ in}^2$$

$$15^2\pi - 9^2\pi$$

