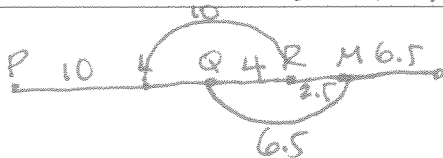


10-1, 10-2 & 11-3 Practice Worksheet

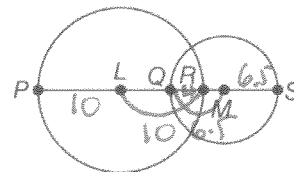
Name Master E
Date _____ Block 2

1-2: The diameters of $\odot L$ and $\odot M$ are 20 and 13 units, respectively, and $QR = 4$. Find each measure.

1. $LQ = \frac{6}{10-4}$



2. $RM = \frac{2.5}{6.5-4}$



3-4: Find the diameter and radius of a circle with the given circumference. Round to the nearest hundredth.

3. $C = 21.2$ ft
 $2\pi r = C$
 $2\pi r = 21.2$

$r = \frac{3.37 \text{ ft}}{21.2 \div (2\pi)}$
 $d = \frac{6.75 \text{ ft}}{\text{if you don't round the radius}}$
or 6.74

4. $C = 5.9$ m
 $2\pi r = 5.9$

$r = \frac{.94 \text{ m}}{5.9 \div (2\pi)}$
 $d = 1.88 \text{ m}$

5-6: Find the exact circumference and area of each circle using the given inscribed or circumscribed polygon.

5. $7^2 + 24^2 = d^2$
 $\sqrt{625} = d$
 $25 = d$
 $12.5 = r$

6. $40^2 + 42^2 = d^2$
 $\sqrt{3364} = d$
 $58 = d$
 $29 = r$

$c = 25\pi = 78.54 \text{ cm}$

$c = 58\pi = 182.21 \text{ mi}$

$A = 12.5^2 \pi = 156.25\pi \text{ cm}^2$

$A = 29^2 \pi = 841\pi \text{ mi}^2$

7-10: Find the indicated measure. Round to the nearest tenth.

7. The area of a circle is 3.14 square centimeters. Find the diameter.

$A = \pi r^2$
 $3.14 = \pi r^2$
 $r^2 = \frac{3.14}{\pi}$
 $r = \sqrt{\frac{3.14}{\pi}} = .999 \approx 1.0$
 $d = 2.0 \text{ cm}$

8. Find the radius of a circle with an area of 855.3 square millimeters.

$A = \pi r^2$
 $855.3 = \pi r^2$
 $r^2 = \frac{855.3}{\pi}$
 $r = \sqrt{\frac{855.3}{\pi}} = 16.5 \text{ mm}$

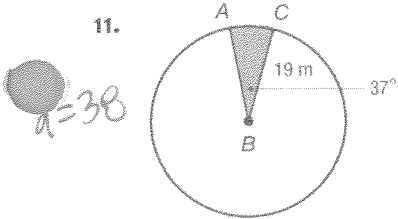
9. The area of a circle is 201.1 square inches. Find the Circumference.

$A = \pi r^2$
 $201.1 = \pi r^2$
 $r^2 = \frac{201.1}{\pi}$
 $r = \sqrt{\frac{201.1}{\pi}} = 8.0$
 $C = 2\pi r$
 $= 2\pi(8) = 16\pi = 50.27$

10. Find the radius of a circle with a circumference of 2290.2 feet.

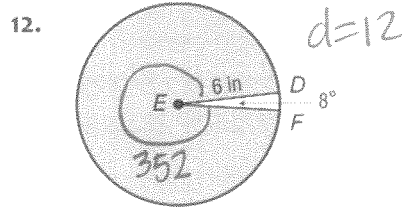
$C = 2\pi r$
 $2290.2 = 2\pi r$
 $r = \frac{2290.2}{2\pi} = 364.5 \text{ ft}$

11-13: Find the arc length and area of each shaded sector. Round to the nearest tenth.



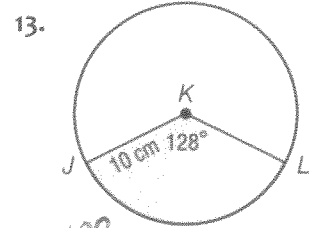
$$l = \frac{37}{360} \cdot 38\pi = 12.3 \text{ m}$$

$$A = \frac{37}{360} \cdot 19^2\pi = 116.6 \text{ m}^2$$



$$l = \frac{352}{360} \cdot 12\pi = 36.9 \text{ in.}$$

$$A = \frac{352}{360} \cdot 36\pi = 110.6 \text{ in}^2$$



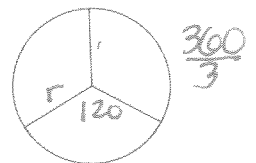
$$l = \frac{128}{360} \cdot 20\pi = 22.3 \text{ cm.}$$

$$A = \frac{128}{360} \cdot 100\pi = 111.7 \text{ cm}^2$$

14-18: Real-world Application problems.

14. In the symbol shown, a circle separated into 3 equal sectors, has come to symbolize peace. Suppose the circle has radius r . What is the formula for the area of each sector?

$$\frac{120}{360} \cdot r^2 \pi = \frac{r^2 \pi}{3}$$



15. Sadie wants to draw a clock face on a circular piece of cardboard. If the clock face has a diameter of 20 centimeters and is divided into congruent pieces so that each sector is 30° , what is the area of each piece?

$r=10$ $\frac{30}{360} \cdot 100\pi = 26.2 \text{ cm}^2$

16. Julie needs to cover the top and bottom of a can of soup with construction paper for her art project. Each circle has a diameter of 7.5 centimeters. What is the total area of the can that Julie must cover rounded to the nearest integer?



$$A = \pi r^2 = 3.75^2 \pi = 44.2$$

$$2 \text{ can tops} @ 44.2 = 88.4 \text{ cm}^2$$

17. Herman purchased a sundial to use as his garden centerpiece. The diameter of the sundial is 9.5 inches.

- a. Find the radius of the sundial.

$$\frac{9.5}{2} = 4.75 \text{ in.}$$



- b. Find the circumference of the sundial to the nearest hundredth.

$$C = 9.5\pi = 29.85 \text{ in.}$$

18. A circular pool is surrounded by a circular sidewalk that is 3 feet wide. The diameter of the sidewalk and pool is 26 feet.

- a. What is the diameter of the pool? 20 feet

- b. What is the area of the sidewalk and pool? $r=13$

$$13^2 \pi = 169\pi = 530.9 \text{ ft}^2$$

- c. What is the area of the pool?

radius of pool = 10 $100\pi = 314.2 \text{ ft}^2$

