

Name: _____ Date: _____ Period: _____

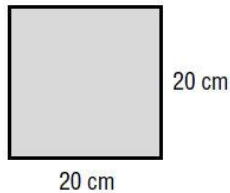
WS "Stilwell Practice 11-1"

Find the area of each figure. Show your formula, work, and answer. Be sure to label! ☺

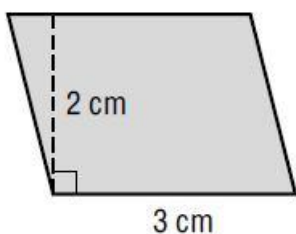
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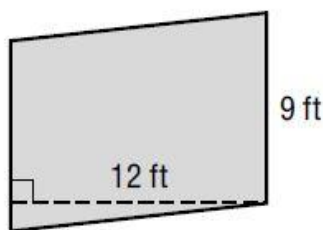
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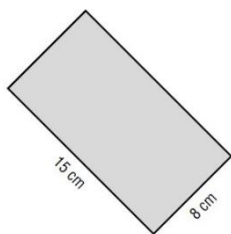
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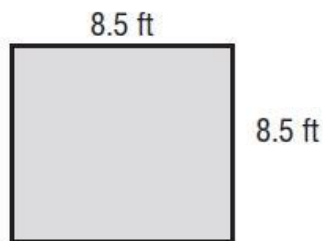
4)



5)



6)



7) Rectangle:

$$l = 7\frac{1}{2} \text{ mm} \ \& \ w = 6\frac{3}{8} \text{ mm}$$

8) Parallelogram:

$$\text{base} = 4\frac{2}{5} \text{ yd} \ \& \ \text{height} = 2 \text{ yd}$$

9) Square:

$$\text{side} = 7.1 \text{ m}$$

10) Parallelogram:

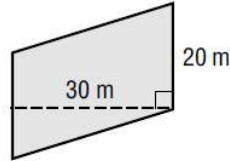
$$\text{base} = 19.6 \text{ in} \ \& \ \text{height} = 14.5 \text{ in}$$

OVER →

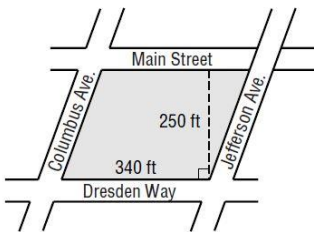
Solve each problem. Show your formula, work, and answer. Be sure to label! 😊

- 11) **CARPET** Mr. Yiji plans on buying carpet for his bedroom that measures 12 feet by 12 feet. So he will know how much carpet to buy, find the area of his bedroom.

- 12) **POOLS** Tamika has designed a pool in the shape shown. What is the area of the bottom of pool if the surface is perfectly flat?

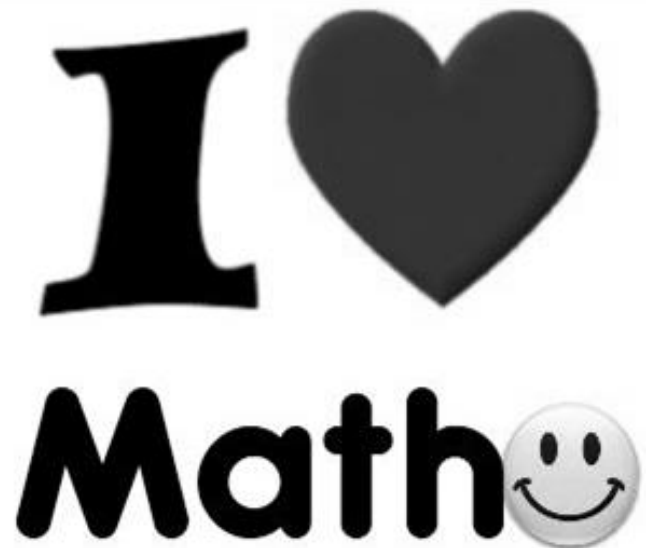


- 13) **CITY PLANNING** Two parallel streets are cut across by two other parallel streets parcel of land in the shape of a parallelogram. Find the area of the parcel of land.



- 14) **LOBBY** A hotel lobby measures 40 yards by 60 yards. Find the area of the lobby's floor.

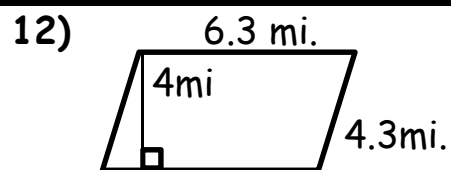
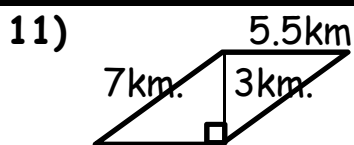
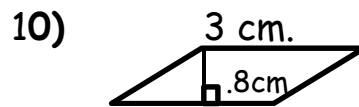
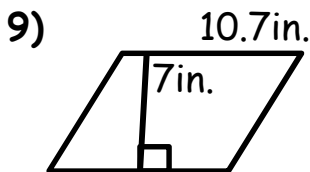
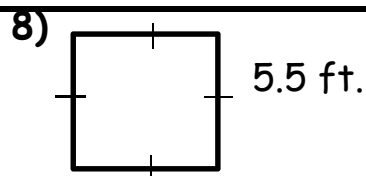
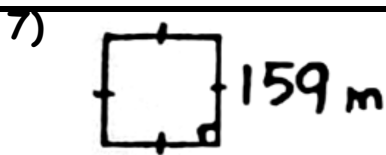
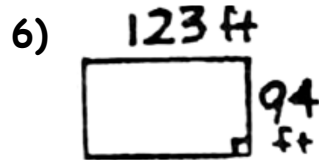
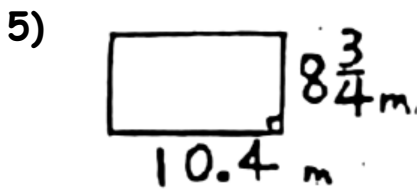
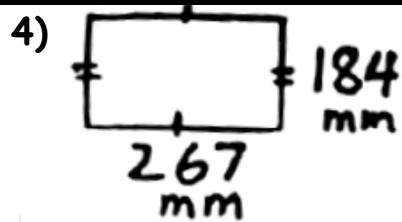
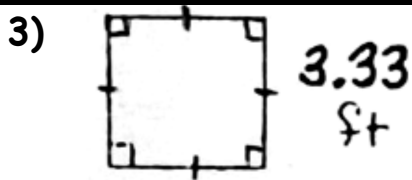
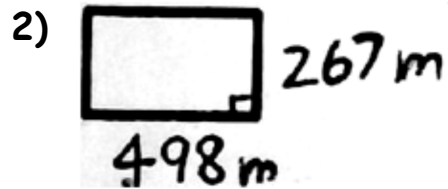
- 15) **MURAL** An artist painted a mural measuring 9 feet by $20\frac{1}{2}$ feet. Find the area of the mural.



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WS "Stilwell Skills Practice 11-1"

Find the area for each shape. Show ALL your work! Calculator = ☺k



11-1

Skills Practice

A calculator is allowed ☺

Area of Parallelograms

Find the area of each polygon. Be sure to give the formula, steps, and answer.

1. base = 5 ft
height = 12 ft

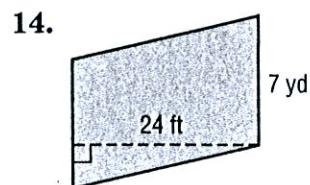
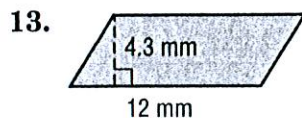
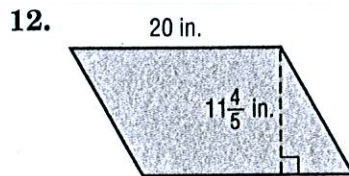
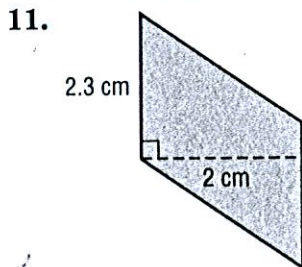
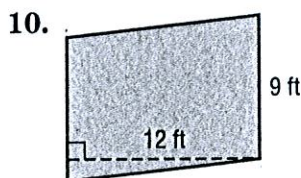
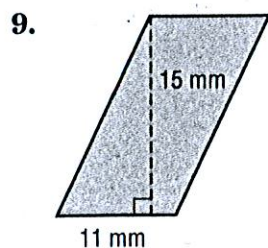
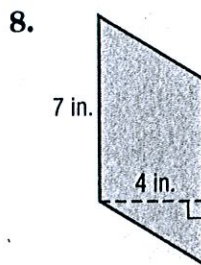
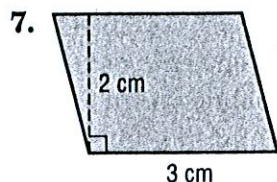
2. base = 9 in.
height = 2 in.

3. base = 6 cm
height = 5.5 cm

4. base = $4\frac{2}{5}$ yd
height = 2 yd

5. base = 15.3 mm
height = 8 mm

6. base = 19.6 m
height = 14.5 m



Lesson 11-1

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Be sure to give the formula, steps, and answer.

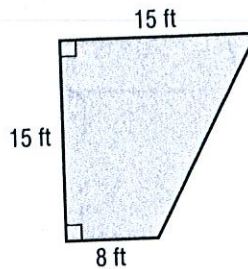
11-2

Word Problem Practice

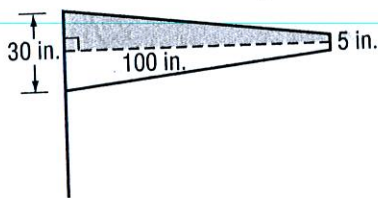
Area of Triangles and Trapezoids A calculator is allowed ☺

1. GEOGRAPHY Arkansas has a shape that is similar to a trapezoid with bases of about 182 miles and 267 miles and a height of about 254 miles. Find the area of the state.

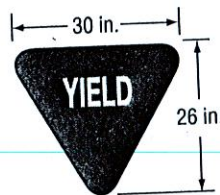
2. PATIOS Greta is making a patio with the dimensions given in the figure. What is the area of the patio?



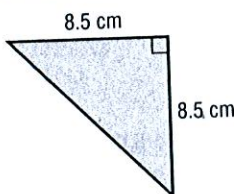
3. FLAGS Malila wants to make the International Marine Signal flag shown which represents the number six. What is the area of the flag?



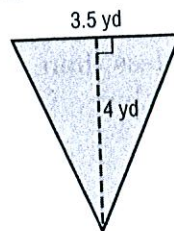
4. SIGNS Find the area of the yield sign.



5. TILING A ceramics company wants to produce tiles in the shape shown. What is the area of the surface of each tile?



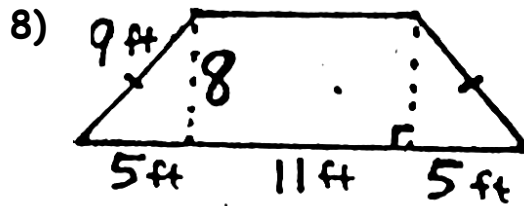
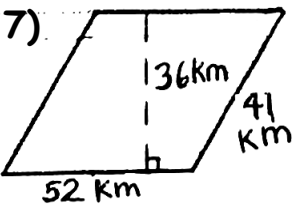
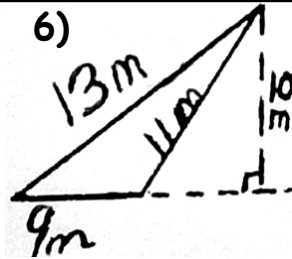
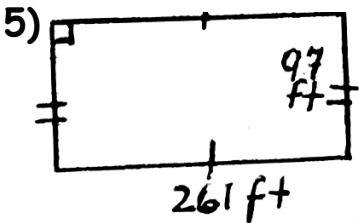
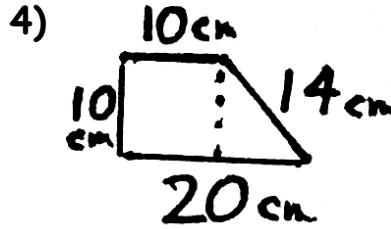
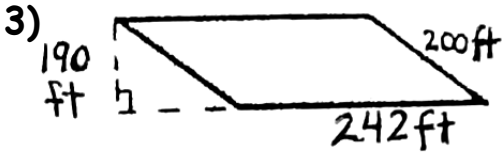
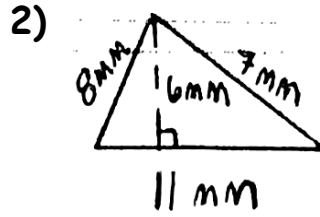
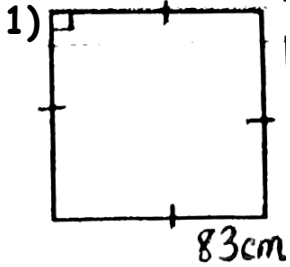
6. GARDENING Kinu wants to buy topsoil for a section of her garden that has the dimensions shown in the figure. What is the area of this section of Kinu's garden?



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WS "Stilwell Practice 11-1 & 11-2"

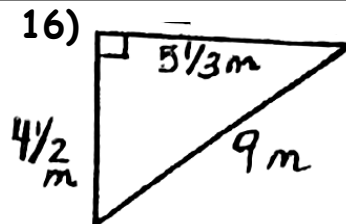
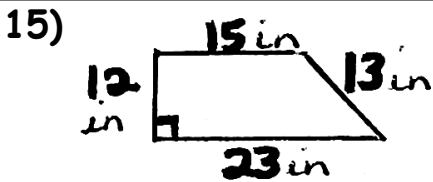
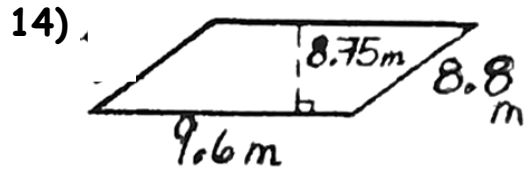
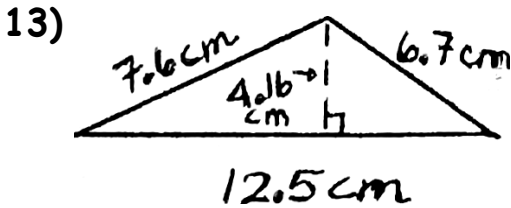
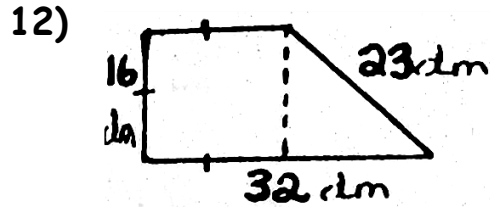
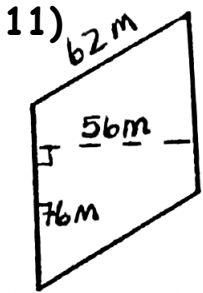
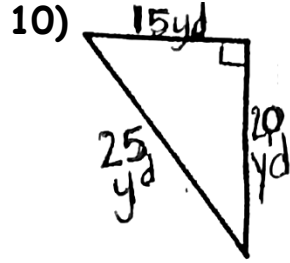
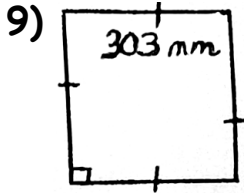
Find the area for each shape. Show ALL your work! Calculator = ☺k



OVER →

Name: _____

Date: _____ Period: _____

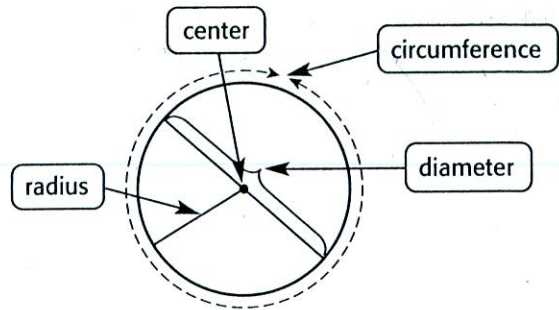


11-3 Study Guide and Intervention

Circles and Circumference

A calculator is allowed 😊

A **circle** is the set of all points in a plane that are the same distance from a given point, called the **center**. The **diameter** d is the distance across the circle through its center. The **radius** r is the distance from the center to any point on the circle. The **circumference** C is the distance around the circle. The circumference C of a circle is equal to its diameter d times π , or 2 times its radius r times π .



Example 1 Find the circumference of a circle with a diameter of 7.5 centimeters.

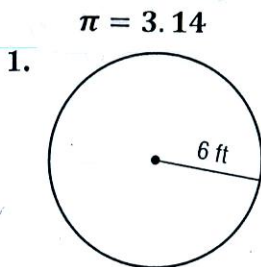
$C = \pi d$ Circumference of a circle.
 $C \approx 3.14 \times 7.5$ Replace π with 3.14 and d with 7.5.
 $C \approx 23.55$ The circumference of the circle is about 23.55 centimeters.

Example 2 If the radius of a circle is 14 inches, what is its circumference?

$C = 2\pi r$
 $C \approx 2 \times 3.14 \times 14$ Replace π with 3.14 and r with 14.
 $C \approx 87.92$ The circumference of the circle is about 87.92 inches.

Exercises

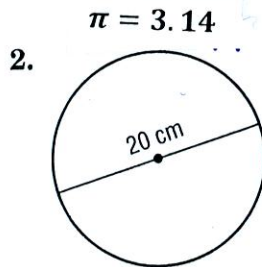
Find the circumference of each circle. Be sure to give the formula, steps, and answer.



$\pi = 3.14$
 5. diameter = 15 km

$\pi = 3.14$
 8. diameter = 600 ft

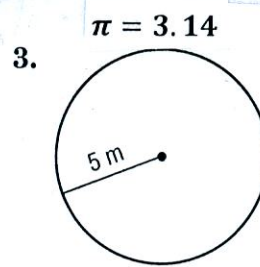
$\pi = 3.14$
 11. radius = 95 in.



$\pi = \frac{22}{7}$
 6. radius = 21 mi

$\pi = 3.14$
 9. radius = 62 mm

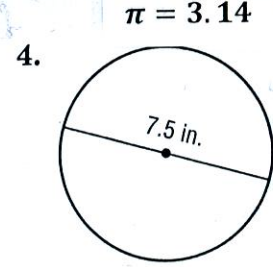
$\pi = \frac{22}{7}$
 12. diameter = 6.3 m



$\pi = 3.14$
 7. radius = 50 m

$\pi = \frac{22}{7}$
 10. diameter = 7 km

$\pi = \frac{22}{7}$
 13. diameter = $5\frac{1}{4}$ cm



11-3**Word Problem Practice**

A calculator is allowed ☺

Circles and CircumferenceBe sure to give the formula, steps, and answer. $\pi = 3.14$

<p>1. PLATES A manufacturing company is producing dinner plates with a diameter of 12 inches. They plan to put a gold edge on each plate. Determine how much gold edging they need for each plate by finding the circumference of each plate.</p>	<p>2. MONEY A dime has a radius of $8\frac{1}{2}$ millimeters. Find the circumference of a dime.</p>
<p>3. MERRY-GO-ROUND Mr. Osterhout is putting trim around the edge of a circular merry-go-round that has a diameter of 15 feet. How much trim does he need to buy?</p>	<p>4. PIZZA Find the circumference of a pizza with a diameter of 10 inches.</p>
<p>5. RACING A circular racetrack has a diameter of $\frac{1}{2}$ mile. How far does a car travel in one lap around the track?</p>	<p>6. TIRE A bicycle tire has a radius of 15 inches. What is the circumference of the tire?</p>
<p>7. EQUATOR Earth's diameter at the equator is 7,926 miles. Find the distance around Earth at its equator.</p>	<p>8. SATURN The ring system around Saturn has a diameter of 170,000 miles. Find the circumference of the ring system.</p>

11-4 Study Guide and Intervention

Area of Circles

A calculator is allowed 😊

The area A of a circle equals the product of pi (π) and the square of its radius r .

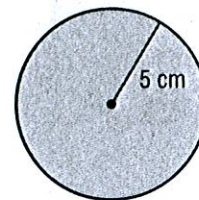
$$A = \pi r^2$$

Example 1 Find the area of the circle.

$$A = \pi r^2 = \pi \cdot r \cdot r \quad \text{Area of circle}$$

$$A \approx 3.14 \cdot 5^2 \quad \text{Replace } \pi \text{ with } 3.14 \text{ and } r \text{ with } 5.$$

$$A \approx 78.5$$



The area of the circle is approximately 78.5 square centimeters.

Example 2 Find the area of a circle that has a diameter of 9.4 millimeters.

$$A = \pi r^2 = \pi r \cdot r \quad \text{Area of a circle}$$

$$A \approx 3.14 \cdot 4.7^2 \quad \text{Replace } \pi \text{ with } 3.14 \text{ and } r \text{ with } 9.4 \div 2 \text{ or } 4.7.$$

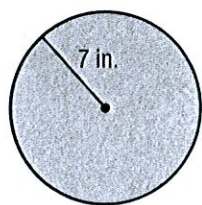
$$A \approx 69.4$$

The area of the circle is approximately 69.4 square millimeters.

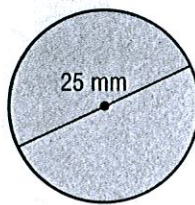
Exercises

Find the area of each circle. Use 3.14 for π . Be sure to give the formula, steps, and answer.

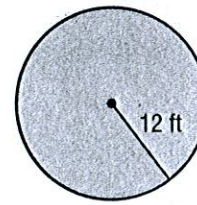
1.



2.



3.



4. radius = 2.6 cm

5. radius = 14.3 in.

6. diameter = 5 yd

7. diameter = 4 mi

8. diameter = 7.9 mm

9. radius = $2\frac{1}{5}$ ft

11-4

Word Problem Practice

A calculator is allowed 😊

Area of Circles

Be sure to give the formula, steps, and answer.

1. POOLS Susan designed a circular pool with a diameter of 25 meters. What is the area of the bottom of the pool?

$$\pi = 3.14$$

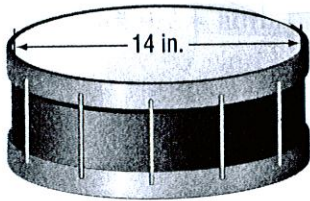
2. MONEY Find the area of the coin.

$$\pi = 3.14$$



3. DRUMS What is the area of the drumhead on the drum shown below?

$$\pi = \frac{22}{7}$$

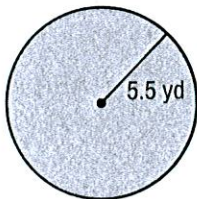


4. PIZZA Estimate the area of the top of a round pizza that has a diameter of 16 inches.

$$\pi = 3.14$$

5. GARDENING Jane needs to buy mulch for the garden with the dimensions shown in the figure. For how much area does Jane need to buy mulch?

$$\pi = 3.14$$




6. UTILITIES What is the area of the top surface of a circular manhole cover that has a radius of 30 centimeters? Use 3.14 for π .


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WS "Stilwell Practice 11-3 & 11-4"


Find the circumference AND area for each circle. Show ALL work! Calculator = ☺k

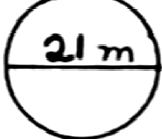
1)  $\pi = \frac{22}{7}$

2)  $\pi = \frac{22}{7}$


3)  $\pi = 3.14$

4)  $\pi = 3.14$

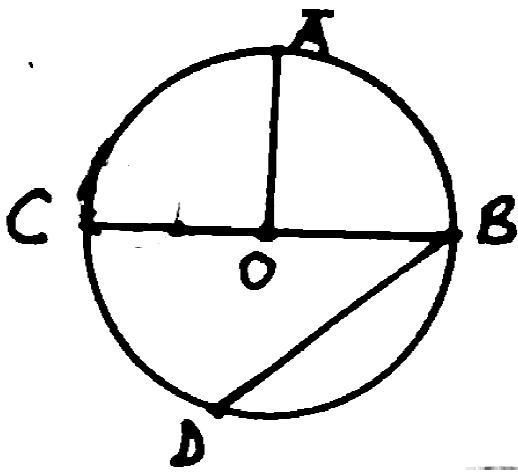
5)  $\pi = \frac{22}{7}$

6)  $\pi = \frac{22}{7}$

7)  $\pi = 3.14$

8)  $\pi = 3.14$

OVER →



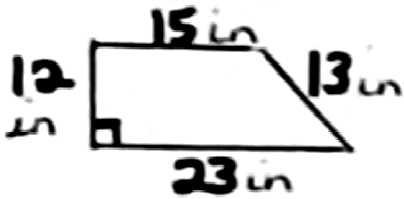
9) What does this symbol \odot represent? _____

10) Name the diameter: _____

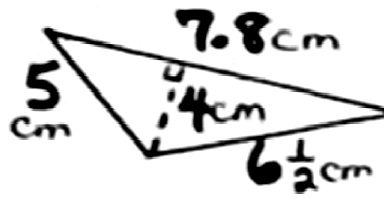
11) Name three radii: _____

Find the area of the following polygons. Show ALL your work! Calculator = ☺k!

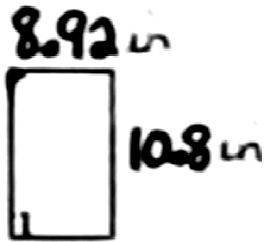
12)



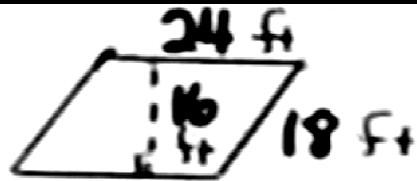
13)



14)



15)



Name: _____ Date: _____ Period: _____

Chapter 11 (part 1): Area, Circles, and Circumference

Bringing It All Together #1

Vocabulary Check

Circle the correct term best completes the sentence.

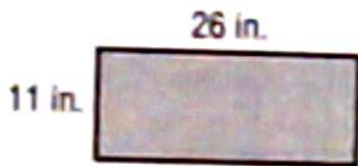
- 1) The distance around a circle is (circumference, area).
 - 2) A trapezoid has (two, four) parallel sides.
 - 3) The formula for area of a circle is ($\pi r r$, $2\pi r$).
 - 4) A (parallelogram, rectangle) has four right angles.
 - 5) The label for a circumference answer is (squared, not squared).
 - 6) A (diameter, radius) is a line segment that connects two points on the circle and passes through the center point.
 - 7) $A = \frac{1}{2}(b_1+b_2)h$ is the formula for the area of a (triangle, trapezoid).
 - 8) *In your own words, explain the difference between the **area** and the **circumference** of a circle: _____
-

OVER →

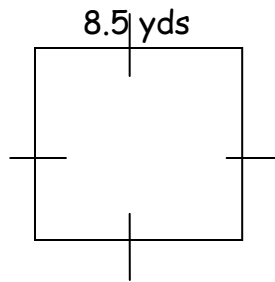
11-1 Area of Rectangles (p 157) & Parallelograms (p 572-576)

Find the area of the given rectangles. Show your work! Calculator = ☺k

9)



10)

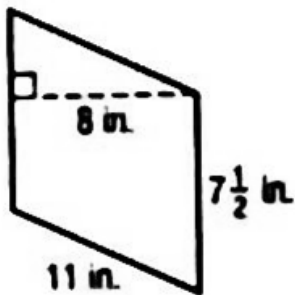


11) length (base) = 12 ft
width (height) = 5 ft

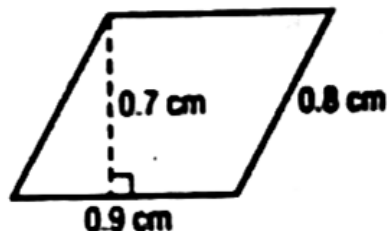
12) length (base) = 15.3 mm
width (height) = 8 mm

Find the area of the given parallelograms. Show your work! Calculator = ☺k

13)



14)



15) base = 5.2 yd
height = 3 yd

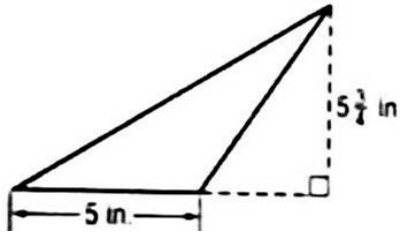
16) base = $15\frac{1}{4}$ ft
height = 13 ft

OVER →

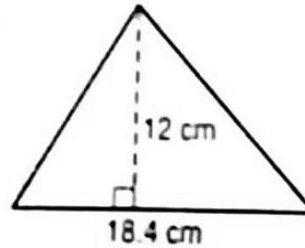
11-2 Area of Triangles & Trapezoids (p 578-582)

Find the area of the given triangles. Show your work! Calculator = ☺k

17)



18)

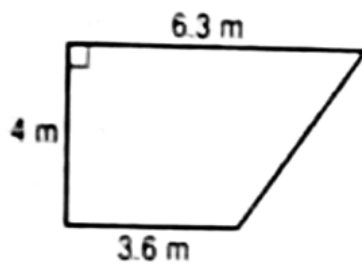


19) base = 12 yd
height = $8\frac{1}{5}$ yd

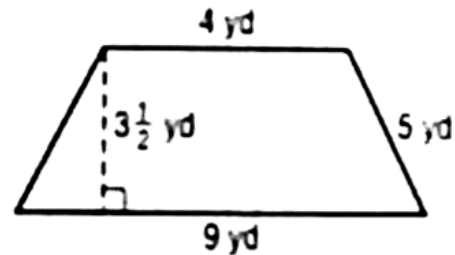
20) base = 15 km
height = 7.4 km

Find the area of the given trapezoids. Show your work! Calculator = ☺k

21)



22)



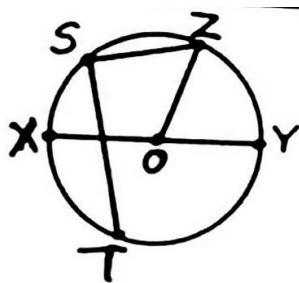
23) bases = 22 cm and 35 cm
height = 18.5 cm

24) bases = $10\frac{4}{5}$ m and $19\frac{3}{5}$ m
height = 3.82 m

OVER →

11-3 Circles and Circumference (p 584-588)

Answer the following questions about circles.

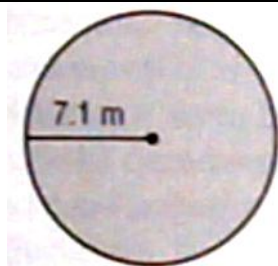


25) Name the diameter: _____

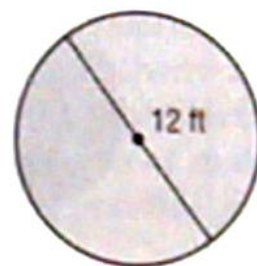
26) Name three radii: _____

Find the circumference of the given circles. Show your work! Calculator = ☺k

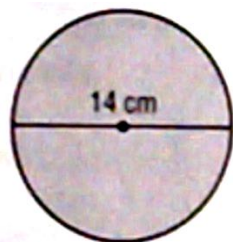
27) $\pi = 3.14$



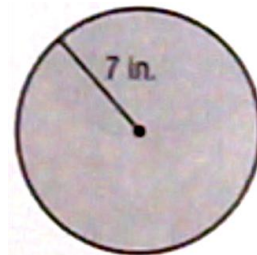
28) $\pi = 3.14$



29) $\pi = \frac{22}{7}$



30) $\pi = \frac{22}{7}$



31) $\pi = 3.14$
radius = $3\frac{3}{4}$ yd

32) $\pi = 3.14$
diameter = 9.4 mm

33) $\pi = \frac{22}{7}$
diameter = 70 mm

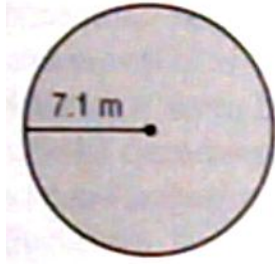
34) $\pi = \frac{22}{7}$
radius = 49 in

OVER →

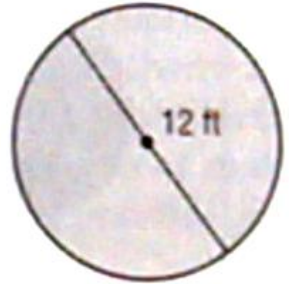
11-4 Area of Circles (p 589-593)

Find the area of the given circles. Show your work! Calculator = 😊k

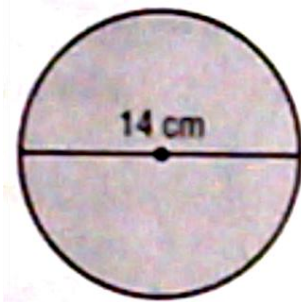
35) $\pi = 3.14$



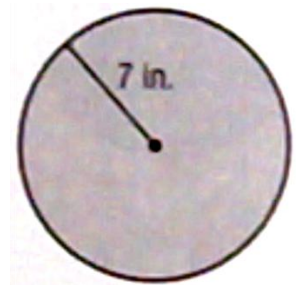
36) $\pi = 3.14$



37) $\pi = \frac{22}{7}$



38) $\pi = \frac{22}{7}$



39) $\pi = 3.14$
radius = $3\frac{3}{4}$ yd

40) $\pi = 3.14$
diameter = 9.4 mm

41) $\pi = \frac{22}{7}$
diameter = 70 mm

42) $\pi = \frac{22}{7}$
radius = 49 in

FINALLY DONE




Name: _____ Date: _____ Period: _____

Chapter 11 (part 1): Area, Circles, and Circumference

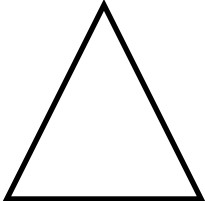
Bringing It All Together #2

Formula Check

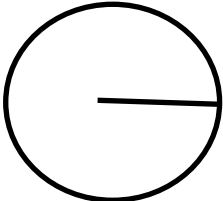
Write the correct formula for each figure:

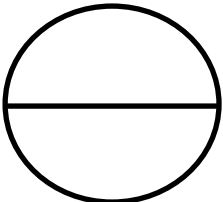
1) Area:  _____

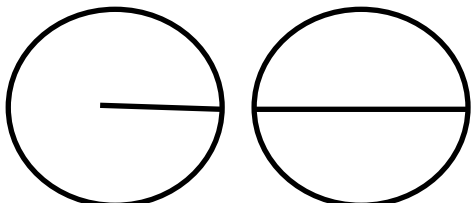
2) Area:  _____

3) Area:  _____

4) Area:  _____

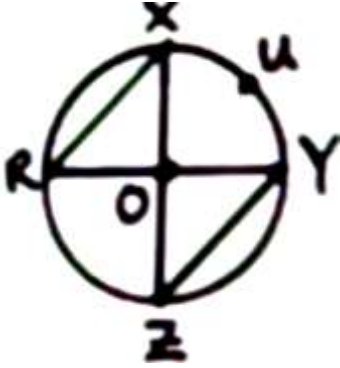
5) Circumference:  _____

6) Circumference:  _____

7) Area:  _____

OVER →

Answer the following questions about circles.



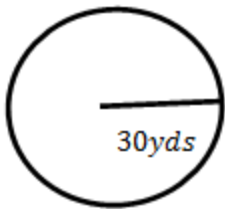
8) Name two diameters: _____

9) Name four radii: _____

10) Name the center: _____

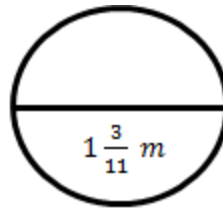
Find the circumference of the given circles. Show your work! Calculator = ☺k

11)



$$\pi = 3.14$$

12)



$$\pi = \frac{22}{7}$$

13) Circle: $\pi = 3.14$
diameter = 54 ft

14) Circle: $\pi = \frac{22}{7}$
radius = $3\frac{1}{2}$ in

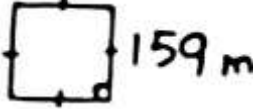
OVER →

Find the area of the given figures. Show your work! Calculator = 😊

15) Parallelogram:
height = 62 mm base = 138 mm

16)

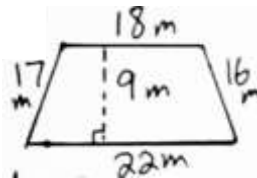


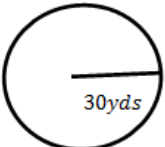
17) 

18) Rectangle:
length (base) = 498 m width (height) = 267 m

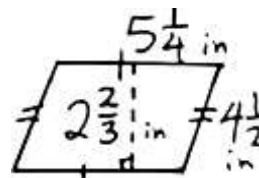
19) Circle: $\pi = \frac{22}{7}$
radius = 7 in

20)



21)  $\pi = 3.14$

22)



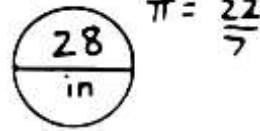
OVER →

Find the area of the given figures. Show your work! Calculator = ☺k

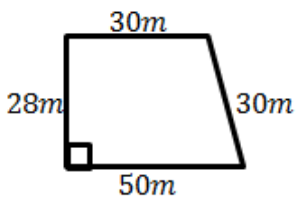
23) Trapezoid:

bases = 18 ft and 22 ft height = 5 ft

24)



25)



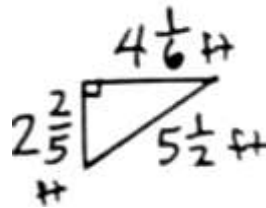
26) Triangle:

base = 24 km height = 18 km

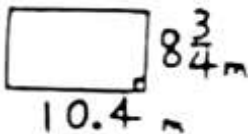
27) Circle: $\pi = 3.14$

diameter = 18 mm

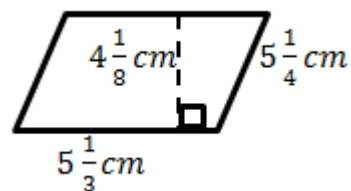
28)



29)



30)



FINALLY DONE

