

Chapter 6 Review

Vocabulary Review

1. Two angles whose measures have a sum of 180° are (complementary, supplementary). **supplementary**
2. A perpendicular segment connecting one base of a parallelogram to another is the (height, radius) of the parallelogram. **height**
3. The (base, height) of a triangle is always one side of the triangle. **base**
4. An (acute, obtuse) angle measures less than 90° . **acute**
5. The distance around a circle is the (diameter, circumference) of the circle. **circumference**

Lesson 6-1

- To write and solve equations to find unknown angle measures

An **angle** is formed by two rays with a common endpoint. The sum of two **complementary** angles is 90° . The sum of two **supplementary** angles is 180° .

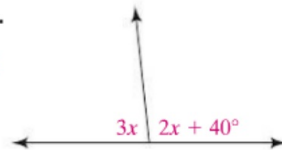
Two intersecting lines form four angles. The angles that are opposite each other are **vertical angles**. They have equal measures, so they are **congruent angles**. The angles next to each other are **adjacent angles**. They are supplementary.

Write an equation relating the measures of the two angles and find the angle measures.

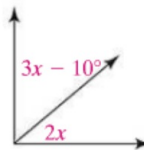
6.

6. $3x + (2x + 40^\circ) = 180^\circ$; 84° ; 96°

7. $(3x - 10^\circ) + 2x = 90^\circ$; 50° ; 40°



7.

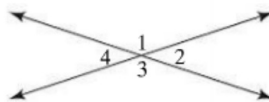


In the diagram at the right, $m\angle 1 = 143.7^\circ$. Find the measure of each angle.

8. $\angle 2$ 36.3°

9. $\angle 3$ 143.7°

10. $\angle 4$ 36.3°

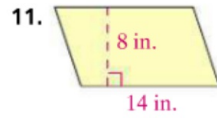


Lesson 6-2

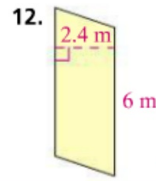
- To find the area of a parallelogram and to relate perimeter and area

The **height of a parallelogram** is the length of a perpendicular segment connecting one **base of a parallelogram** to the other. To find the area of a parallelogram, use the formula $A = bh$.

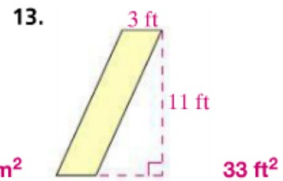
Find the area of each parallelogram.



112 in.^2



14.4 m^2



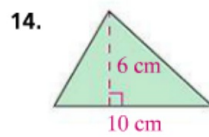
33 ft^2

Lesson 6-3

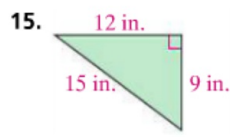
- To find the area of a triangle and to relate side lengths and area

The **height of a triangle** is the length of the perpendicular segment from a vertex of the triangle to the **base** opposite the vertex or to an extension of the base. To find the area of a triangle, use the formula $A = \frac{1}{2}bh$.

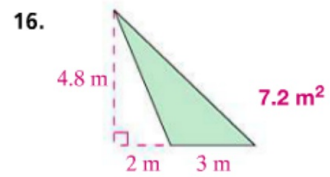
Find the area of each triangle.



30 cm^2



54 in.^2



7.2 m^2

Lesson 6-4

- To find the area of a trapezoid and the areas of irregular figures

parallelogram

$$A = bh$$

triangle

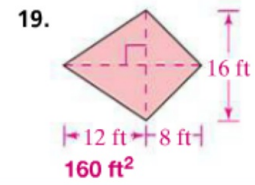
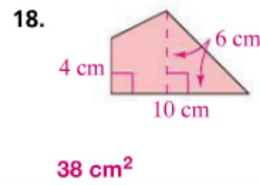
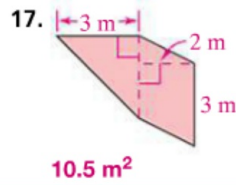
$$A = \frac{1}{2}bh$$

trapezoid

$$A = \frac{1}{2}h(b_1 + b_2)$$

To find the area of an irregular figure, first separate it into familiar figures and find the area of each piece. Then add the areas.

Use familiar figures to find the area of each figure.

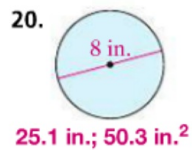


Lesson 6-5

- To find the circumference and area of a circle

To find the **circumference** of a circle, use the formula $C = \pi d = 2\pi r$. To find the area of a circle, use the formula $A = \pi r^2$.

Find the circumference and area of each circle.



Also know perimeter for parallelograms and triangles.