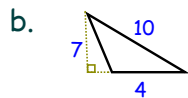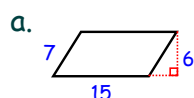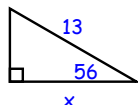## Lesson 10.2 Warm Up

1. Find the area of each figure:

   a.

   7   6   15

   b.

   7   10   4

2. What is the measure of an interior angle of a regular hexagon?
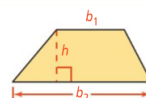
3. Find x.

   13   56   x

1 What is the area of a trapezoid with height 7 cm and bases 12 cm and 15 cm? (label your answer)

Lesson 10.2 Areas of Trapezoids, Rhombuses, and Kites

Theorem 10-4 Area of a Trapezoid

The area of a trapezoid is half the product of the height and the sum of the bases.
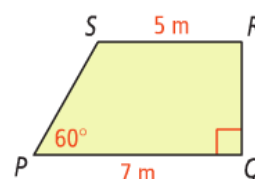
$$A = \tfrac{1}{2}h(b_1 + b_2)$$
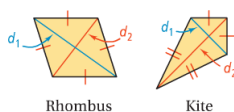
b_1 h b_2

Ex. What is the approximate area of Nevada?

205 mi   309 mi   Reno   Carson City   511 mi   Las Vegas

Ex. What is the area of trapezoid PQRS?

S   5 m   R
60°
P   7 m   Q

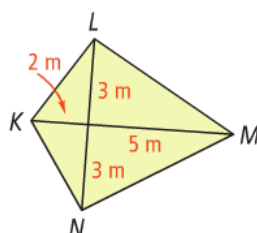**Theorem 10-5 Area of a Rhombus or a Kite**

The area of a rhombus or a kite is half the product of the lengths of its diagonals.
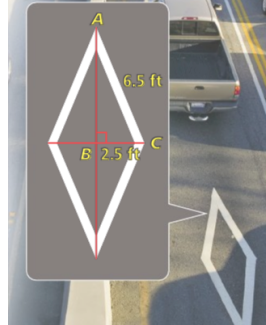
$$A = \tfrac{1}{2}d_1 d_2$$

d_1 d_2 d_1 d_2

Rhombus   Kite

Ex. What is the area of kite KLMN?
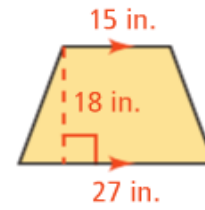
L
2 m
3 m
K   5 m   M
3 m
N

2 What is the area of a kite that has diagonals 12 in. and 9 in. long? (label your answer)

Ex. The High Occupancy Vehicle (HOV) lane is marked by a series of "diamonds" or rhombuses painted on the pavement. What is the area of the HOV lane diamond shown below?

3 What is the area of the figure below? (include your label)

4 What is the area of the figure below? (label your answer)