Geometry/Trig 2   Name: _____

11.1, 11.2, 11.3 Area of Plane Figures   Date: _____

Area & Perimeter of a Rectangle:

Rectangle

h

<div style="background:yellow">**Area of a Rectangle: _____**</div>

b   Perimeter of a Rectangle: _____

Throughout this unit, you will see the terms _____ and _____ frequently. It is very important that you remember:

Base (b) and height (h) are always _____!

The units for area are always _____; the units for perimeter are not.

Examples:

Units for Area: _____   Units for Perimeter: _____

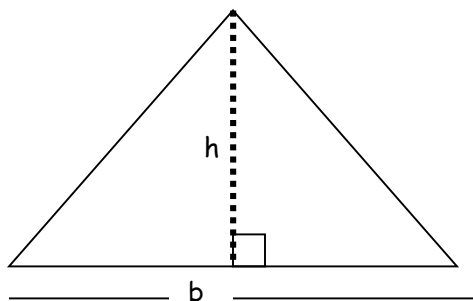| Ex1.	Ex2.	Ex3.
10in Find the height, area, and perimeter of the rectangle. h /26in h = _____ A = _____ P = _____	Given: A = 56, b = 8 Find height and perimeter. P = _____	Given: P = 38ft, h = 5ft Find base and area. b = _____ A = _____

Area & Perimeter of a Triangle:
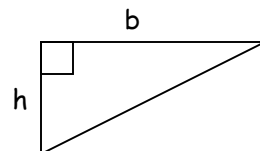
Triangle

h

b

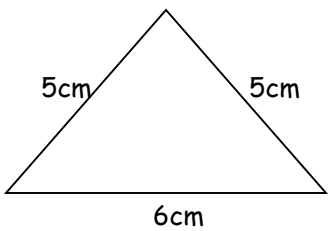<div style="background:yellow">**Area of a Triangle: _____**</div>

Perimeter of a Triangle → Add up all of the side lengths!

Note: In a right triangle, the base and height are the legs of the triangle. (Because the legs of the triangle are perpendicular.)

Base (b) and height (h) are always _____!
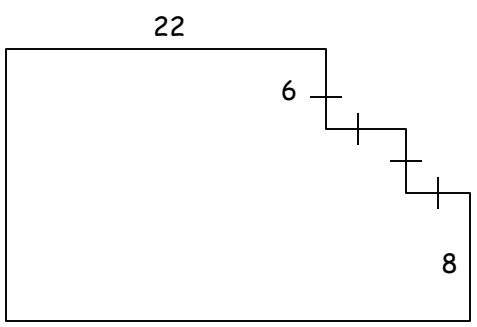
b

h

Ex1. Find the area and perimeter.

5cm   5cm

6cm

h = _____

A = _____

P = _____

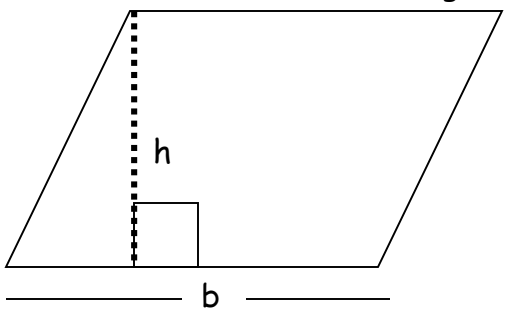**Ex2.** Find the area and perimeter of a triangle with sides 6, 8, and 10 cm.

A = _____

P = _____

Area & Perimeter of Irregular Figures:

22

6

8

Area: Break into small shapes

Perimeter: Sum up side measures

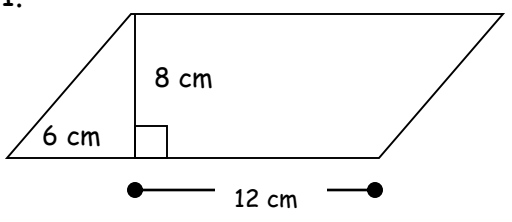
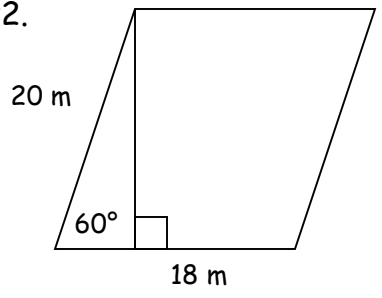**Area & Perimeter of a Parallelogram:**

h

b

Parallelogram

Area: _____

Base (b) and height (h) are always _____!
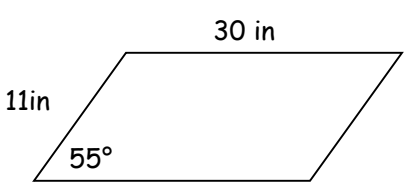

Ex1.

8 cm

6 cm

12 cm

Area: _____

Perimeter: _____

Ex2.

20 m

60°

18 m

Area: _____

Perimeter: _____

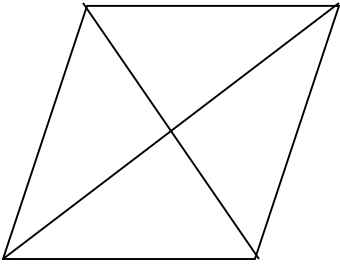
Ex3.

30 in

11in

55°

Area: _____

Perimeter: _____

Area & Perimeter of a Rhombus:

Rhombus
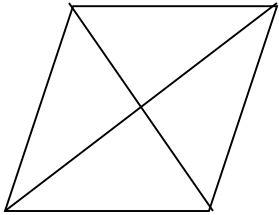
Area: _____

Perimeter: _____

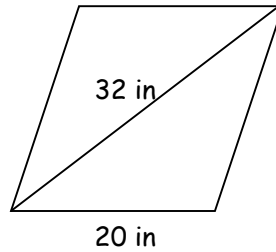Note: You can also calculate the area of a rhombus using the parallelogram formula.

Ex1.

d_1 = 24 ft
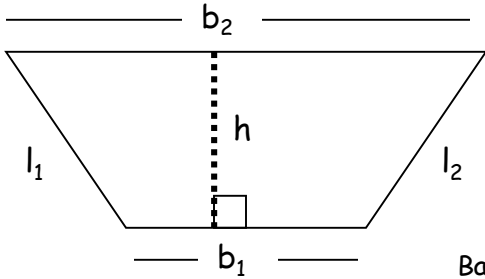
d_2 = 18 ft

Area: _____

Perimeter: _____

Ex2.

32 in

20 in

Area: _____

Perimeter: _____
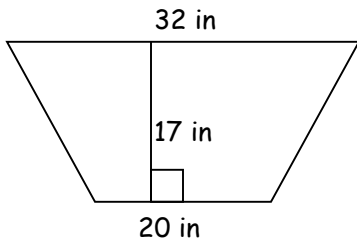
Area & Perimeter of a Trapezoid:

Trapezoids

b_2

l_1 h l_2

b_1

Area: _____

The bases (b_1 and b_2) of a trapezoid are always _____.

Base (b) and height (h) are always _____!

Ex1.

32 in

17 in

20 in

Area: _____

Ex2.

20 in

13 in

25 in
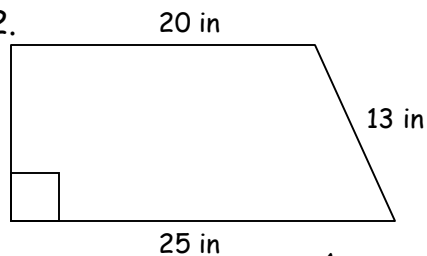
Area: _____

Perimeter: _____

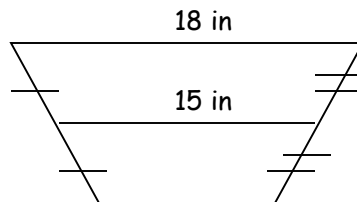Recall: The _____ of a trapezoid is a segment that connects the midpoints of the two _____ of the trapezoid.

The formula for finding the _____ is:

An alternative formula for area of a trapezoid is:

A = _____ x height

Ex3.

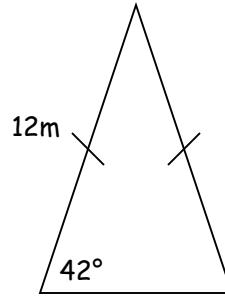18 in   Height = 10 in

15 in

Area: _____

Name: _____

Date: _____

Ex1. Find the area and perimeter of a rectangle with a base of 12cm and a diagonal length of 13cm.

Area: _____

Perimeter: _____

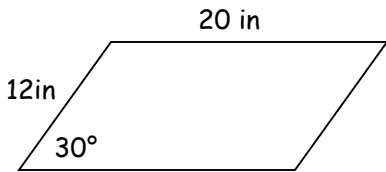
Ex2. Find the area and perimeter of the triangle shown below.

12m

42°

Area: _____

Perimeter: _____

Ex3. Find the area and perimeter of the parallelogram shown below.
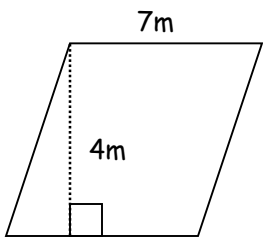
20 in

12in

30°

Area: _____

Perimeter: _____

Ex4. Find the area and perimeter of the rhombus with diagonal lengths 12mm and 16mm.
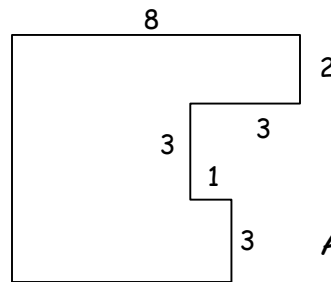
Area: _____

Perimeter: _____

Ex5. Find the area and perimeter of the rhombus shown below.
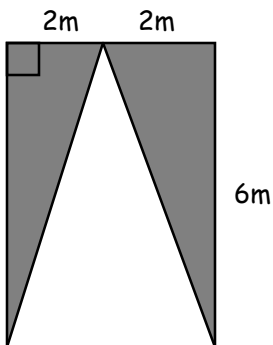
7m

4m

Area: _____

Perimeter: _____

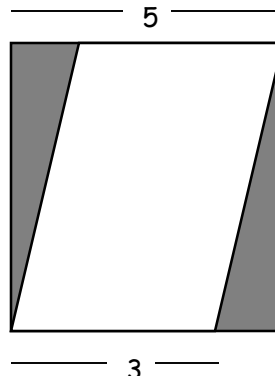**Ex6.** Find the area and perimeter of the figure below. All segments are perpendicular. (cm)

8

2

3

3

3

1

3

Area: _____

Perimeter: _____

Ex7. Find the area of the shaded region.

2m   2m

6m

Area: _____

Ex8. Find the area of the shaded region.

5

(Outside figure is a square.)

3

Area: _____