Chapter 10 Review (Part 1)

Match the correct area formula with each shape.

$$A = \pi r^2$$

Rectangle/Parallelogram

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

Triangle (regular)

$$A = bh$$

Triangle (trigonometric)

$$A = area\ of\ sector - area\ of\ triangle$$

Trapezoid

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

Rhombus/Kite

Regular polygon

$$A = \frac{1}{2}d_1d_2$$

Circle

$$A = \frac{m\,\widehat{PR}}{360} \cdot \pi r^2$$
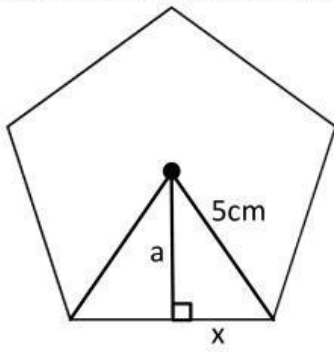
Sector of a circle

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

Segment of a circle

$$A = \frac{1}{2}bc(\sin A)$$

Find the area of each polygon. Leave your answer in terms of pi when necessary.

1.) a triangle with a base of 3cm and a height of 5 cm

2.) a trapezoid with a height of 8in and bases of 12in and 17in

3.) a kite with diagonal lengths of 6m and 9m

4.) a circle with a diameter of 14mm

5.) a pentagon with an apothem of 7cm and side lengths of 16cm

6.) a parallelogram with a base length of 9in and a height of 10in

Fill in each missing blank to finish finding the area of the pentagon. Round to the nearest tenth.

Step 1: Find the angle.

$$\frac{360}{} = 72 \qquad \frac{72}{} =$$

Step 2: Find the apothem.

$$(36) = \frac{}{5}$$

$$a = 5(36)$$

Step 3: Find the perimeter.

$$(36) = \frac{x}{}$$

$$x = (36)$$

$$p = 2x \cdot = 2[5(36)] \cdot$$

Step 4: Find the area.

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

$$A = \frac{1}{2} \cdot [5(36)] \cdot 2[5(36)] \cdot$$

$$A =$$