

Apprenticeship Math 12
ASSIGNMENT: Classifying Triangles

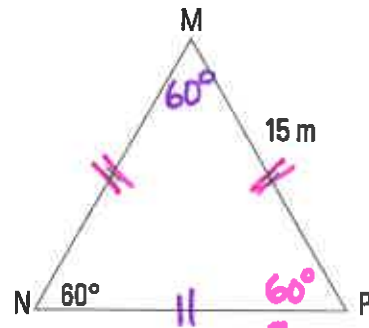
Name: _____

Date: _____

1. Use the diagram to answer the questions below.

a) What is the measure of $\angle M$? 60°

$$180 - 60 - 60 = 60^\circ$$



2 equal sides
2 equal angles

b) Classify $\triangle MNP$ by angle size and side length.

• by angle size: acute triangle

• by side length: equilateral triangle

(3 equal sides
3 equal angles)

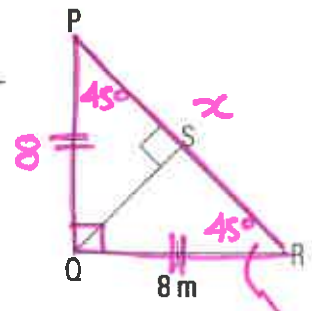
2. Use the diagram to answer the questions below.

a) To the nearest tenth, what is the length of PR? 11.3m

$$8^2 + 8^2 = x^2$$

$$\sqrt{128} = x$$

$$11.3 = x$$



$$180 - 90 = 90$$

$$\frac{90}{2} = 45^\circ$$

b) Classify $\triangle PQR$ by angle size and side length.

• by angle size: right triangle

• by side length: isosceles triangle

c) Classify $\triangle QRS$ by angle size and side length.

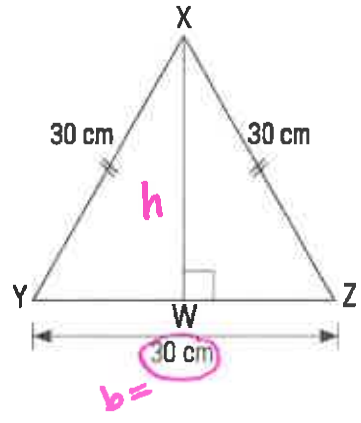
• by angle size: right triangle

• by side length: isosceles triangle

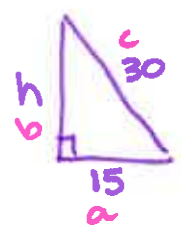


$$180 - 90 - 45 = 45^\circ$$

3. An equilateral triangle XYZ has a perimeter of 90 cm. To the nearest tenth, what is its area?



Triangle: $A = \frac{bh}{2}$



$$15^2 + h^2 = 30^2$$

$$h^2 = 30^2 - 15^2$$

$$h = \sqrt{675}$$

$$h = 26.0 \text{ cm}$$

$$A = \frac{30(26)}{2}$$

$$= \boxed{390 \text{ cm}^2}$$

4. An asymmetrical roof on a shed has sections that are 18 ft and 14 ft long. The roof has a rise of 6 feet.

a) To the nearest tenth, how wide is the building?



$$6^2 + x^2 = 18^2$$

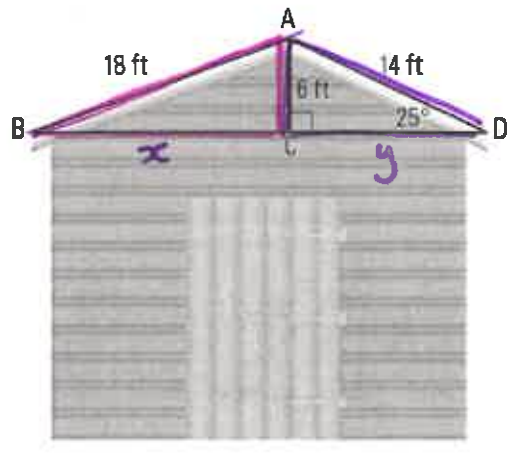
$$x = 17.0 \text{ ft}$$



$$6^2 + y^2 = 14^2$$

$$y = 12.6 \text{ ft}$$

$$17 + 12.6 = \boxed{29.6 \text{ ft}}$$



b) Classify ΔABC , ΔACD , and ΔABD by angle size and side length.

	by angle size	by side length
ΔABC	right	scalene
ΔACD	right	scalene
ΔABD	obtuse	scalene

