**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Similar Triangles**

Triangles are similar if they have the same shape. More precisely triangles are similar if they have the same\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and have sides that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Find the missing values below.**

x

 4

8

10

In the accompanying diagram, triangle PIT is similar to triangle ABC, PI = 36, PT = 32, and
TI = 20, and AB = 9. What is the length of BC?

P

36

A

I

B

9

20

32

 T

C

 Are the following triangles proportional?

P

A

6

15

3

8

B

20

C

 T

7.5

I

2x + 1

12

10

5

A vertical flagpole casts a shadow 12 feet long at the same time that a nearby vertical post 8 feet casts a shadow 3 feet long. Find the height of the flagpole in feet.

Similar triangles are all about PROPORTIONS!!

What do we know about ALL of the following?

AC = \_\_\_\_\_\_\_\_ XY = \_\_\_\_\_\_\_ <X = \_\_\_\_\_\_\_\_\_ <C = \_\_\_\_\_\_\_\_

AB : XY = \_\_\_\_\_\_\_\_\_\_ BC:YZ = \_\_\_\_\_\_\_\_\_\_\_\_\_ ? BC : XZ ? = \_\_\_\_\_\_\_\_\_\_

Perimeter ABC : Perimeter XYZ = \_\_\_\_\_\_\_\_\_\_\_

Area ABC : Area XYZ = \_\_\_\_\_\_\_\_\_\_\_\_\_

A

30ᵒ

X

12

5

60ᵒ

Z

Y

C

B

9

3

How many triangles do you see??

5

Find the missing side.

3

2

v

 4

 x

17

9

 x

In the diagram below, of triangle ABC, D is a point on AB, E is a point on BC, AC || DE, CE = 25 inches, AD = 18 inches, and DB = 12 inches. Find, to the nearest tenth of an inch, the length of EB.



 Given: In the diagram, DE is parallel to AC, BD=4, DA=6, and EC=8. Find BC to the nearest tenth.

