(17.)

$$\frac{x}{3.6} = \frac{1.8}{.5}$$

(3)

$$\frac{5}{t} = \frac{t}{45}$$
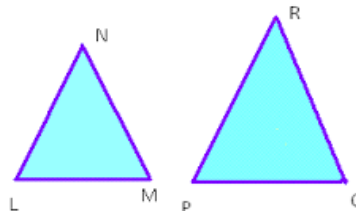
$\sqrt{t^2} = \sqrt{225}$

$t = 15$

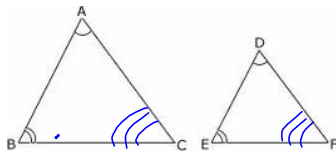(16)

30　　x

6　20

$$\frac{30}{x} = \frac{6}{20}$$

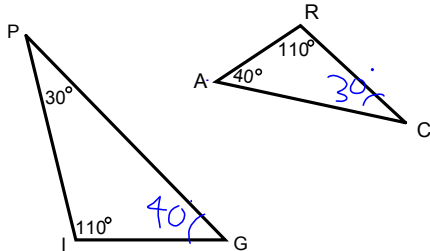# Unit 10 Day 3

Triangle Silmilarity

Name_____period_____

I Can__Identify △ 's by__
postulates & Theorems
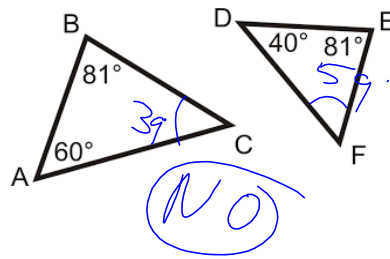
Angle-Angle Similarity Postulate (AA~)

If two angles of one triangle are congruent to two angles of another triangle, then the two triangles are similar.

AAA

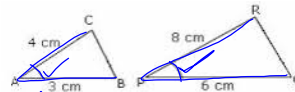Are the two triangles similar? If they are write the similarity statement.

by AAA

ΔPIG ~ ΔCRA

ΔGIP ~ ΔARC

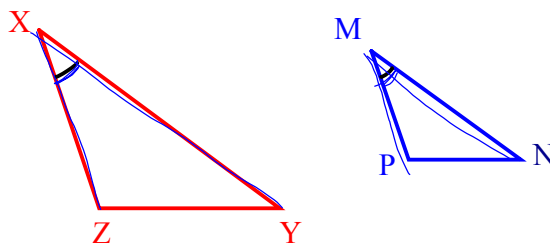Are the two triangles similar? If they are write the similarity statement.

NO

Side-Angle-Side (SAS) Similarity Theorem
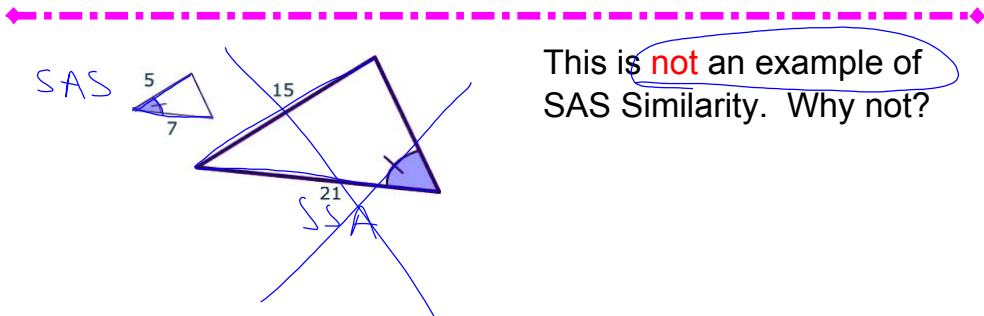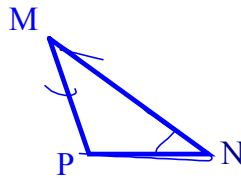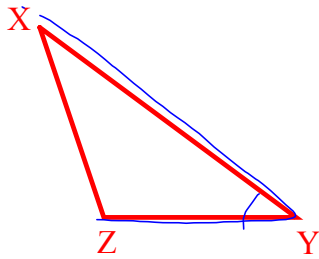
$\dfrac{4}{3} = \dfrac{8}{6}$ ✓

If an angle of one triangle is congruent to an angle of a second triangle and the lengths of the sides including these angles are proportional, then the triangles are similar.

If $\angle X \cong \angle M$ and $\dfrac{ZX}{PM} = \dfrac{XY}{MN}$, then $\triangle XYZ \sim \triangle MNP$

SAS

SSA

This is not an example of SAS Similarity. Why not?

X

M

$$\frac{ZY}{YX} = \frac{PN}{NM}$$

P   N

Z   Y

If angle Y is ____ to angle N, which 2 sides need to be proportionate for the triangles to be similar by SAS?

If $\boxed{\dfrac{XZ}{MP} = \dfrac{ZY}{PN}}$, which 2 angles need to be ____ for the triangles to be similar by SAS?
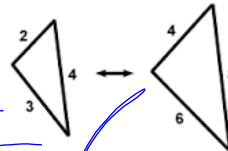
X   M

$\angle Z \cong \angle P$

Z   Y   N

Side-Side-Side (SSS) Similarity Theorem

If the corresponding side lengths of two triangles are proportional ,
then the triangles are similar.
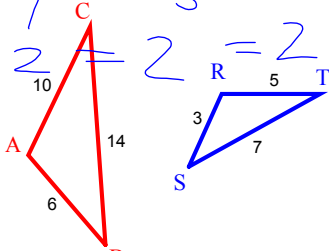
$$\frac{4}{8} = \frac{3}{6} = \frac{2}{4} \checkmark$$

2   4
4   8
3   6

Are the two triangles similar?

If they are write the similarity statement.

$$\frac{14}{7} = \frac{10}{5} = \frac{6}{3}$$

$$2 = 2 = 2$$

C

R   5   T

10

3

A   14   7

6   S

B

by SSS,

△CAB ∽ △TRS

Are the two triangles similar?

If they are write the similarity statement.

B
18   14
A   24   C
Q
9   7
P   12   R
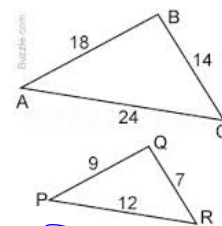
by SSS,

△ABC ∽ △PQR

Which triangle is similar to △ABC?

B

8   12

A   16   C

D   12   F
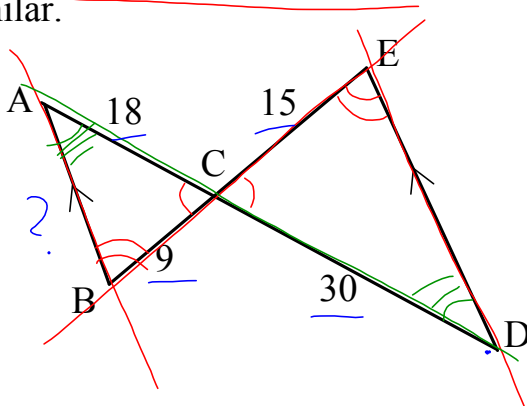
6   9

E

H

10   8

J   16   G
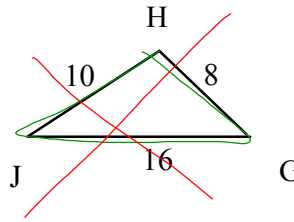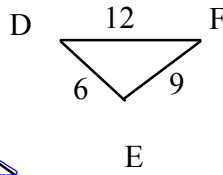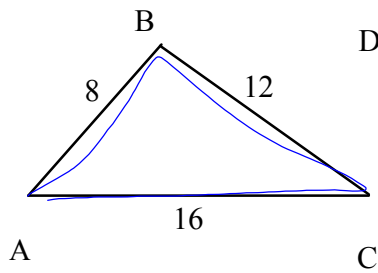
$$\frac{16}{12} = \frac{12}{9} = \frac{8}{6}$$

$$\frac{4}{3} = \frac{4}{3} = \frac{4}{3}$$

by SSS,

△ABC ∽ △DEF

$$\frac{16}{16} = \frac{12}{10} = \frac{8}{8}$$

Tell 2 different methods you would use to show that the triangles are similar.

A   18   15   E

C

?   9   30

B   D

AA ∽
AAA

SAS

$$\frac{18}{9} = \frac{30}{15}$$ ✓

△ACB ∽ △DCE

Tell what method you would use to show that the triangles are similar.

S

15

9

R   12   T

P

3   5

N   4   G
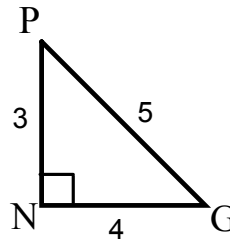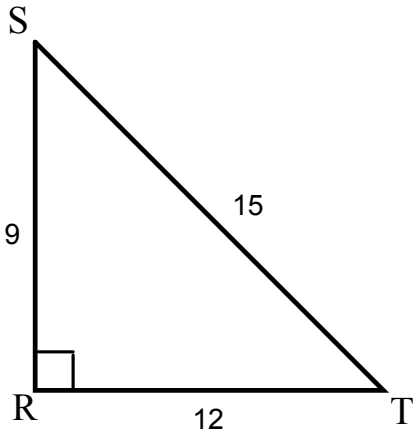
SAS: $\dfrac{9}{12} = \dfrac{3}{4}$ ✓

$\triangle SRT \backsim \triangle PNG$
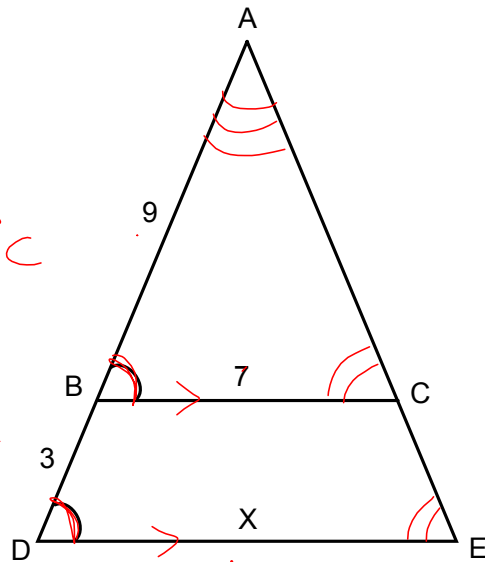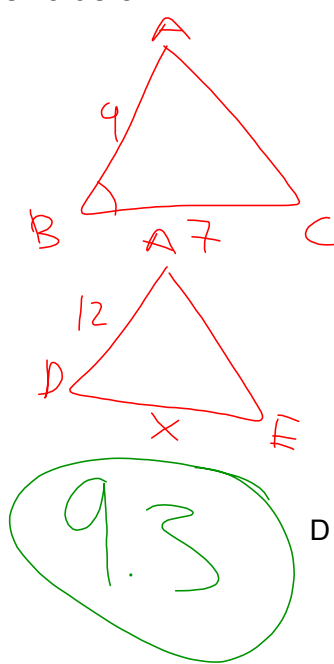
SSS

$\dfrac{3}{9} = \dfrac{4}{12} = \dfrac{5}{15}$ ✓

$\triangle GPN \backsim \triangle TSR$

Is there enough information to find the
value of x? If so , find the value of x.

AAA

SAS

$\dfrac{9}{7} = \dfrac{12}{x}$ ⬭(9.3)⬭

A

4

B   A 7   C

12

D

x   E

A

9

B   7   C

3

D   X   E

Name and draw and example of the three Triangular Similarity Theorems?

2) L ———— M
    78
    82
    K

12) B
    6
    A   C