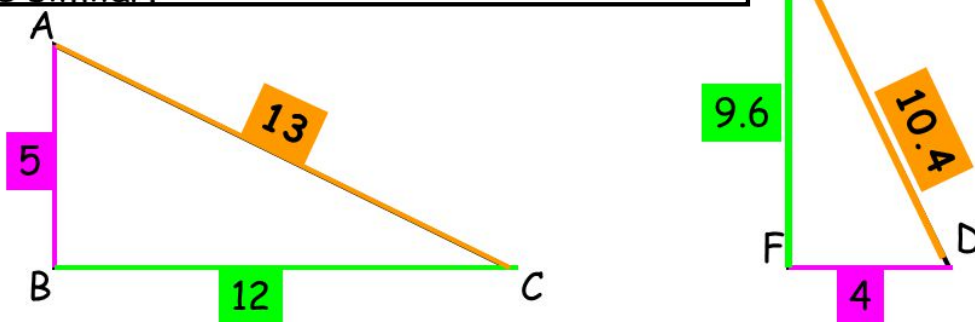# SSS and SAS Triangle Similarity

Nov 4-10:28 AM

SSS Similarity Theorem
If corresponding sides of two triangles are proportional, then the two triangles are similar.

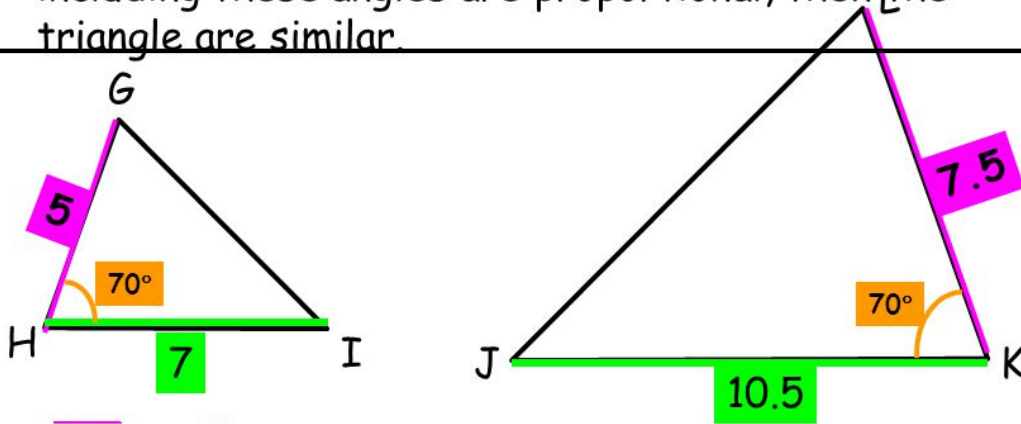$$\frac{m\overline{AB}}{m\overline{DF}} = \frac{5}{4} = 1.25$$

$$\frac{m\overline{AC}}{m\overline{DE}} = \frac{13}{10.4} = 1.25$$

$$\frac{m\overline{BC}}{m\overline{FE}} = \frac{12}{9.6} = 1.25$$

$$\triangle ABC \sim \triangle DFE$$

Mar 2-9:44 AM

SAS Similarity Theorem
If an angle of one triangle is congruent to an angle of another triangle, and then lengths of the sides including these angles are proportional, then the triangle are similar.

G

5

70°

H   **7**   I

J   **10.5**   K

7.5

70°

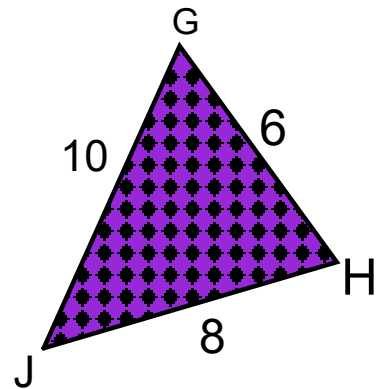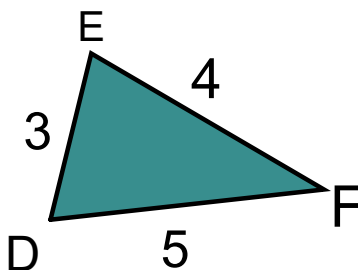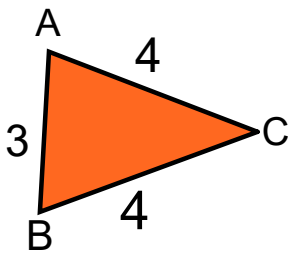$$\frac{m\overline{GH}}{m\overline{LK}} = \frac{5}{7.5} = 0.\overline{66}$$

$$\frac{m\overline{HI}}{m\overline{KJ}} = \frac{7}{10.5} = 0.\overline{66}$$

$m\angle H = m\angle K$
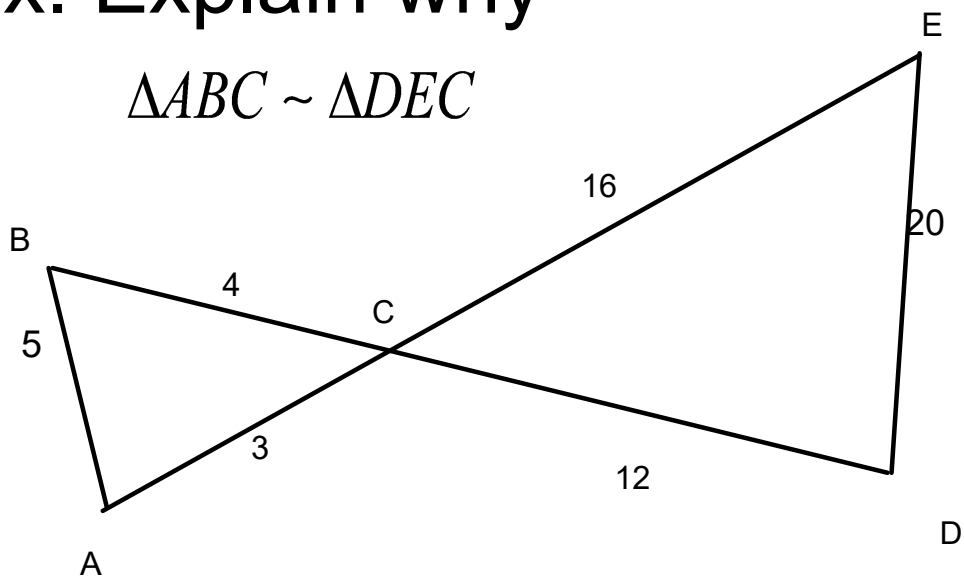
$\triangle GHI \sim \triangle LKJ$

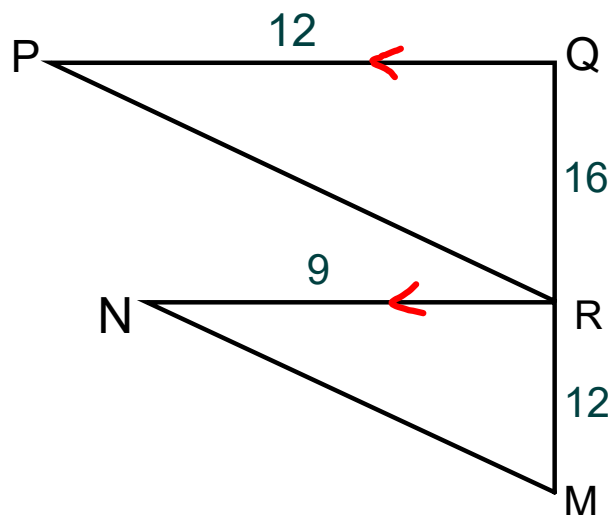Mar 2-9:42 AM

Ex. Which triangles are similar and why?

A
4
3   C
B   **4**

E
4
3
D   **5**   F

G
10   **6**
J   **8**   H

Feb 14-1:54 PM

2

Ex. Explain why

$$\Delta ABC \sim \Delta DEC$$

E

16

B

4

C

5

20

3

12

D

A

Feb 14-1:54 PM

EX. Explain why the triangles are similar.

P   12   Q

16

9

N   R

12

M

Feb 14-2:59 PM

EX. Prove the triangles are similar.

E

D

16

12.8
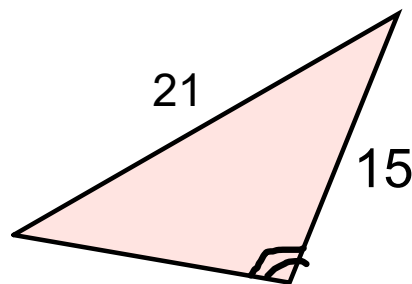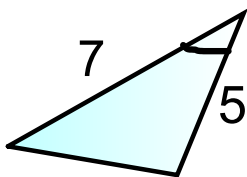
A   4   B   C
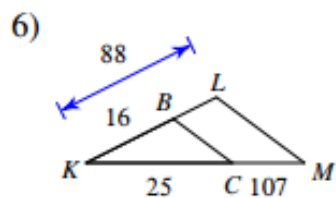
20
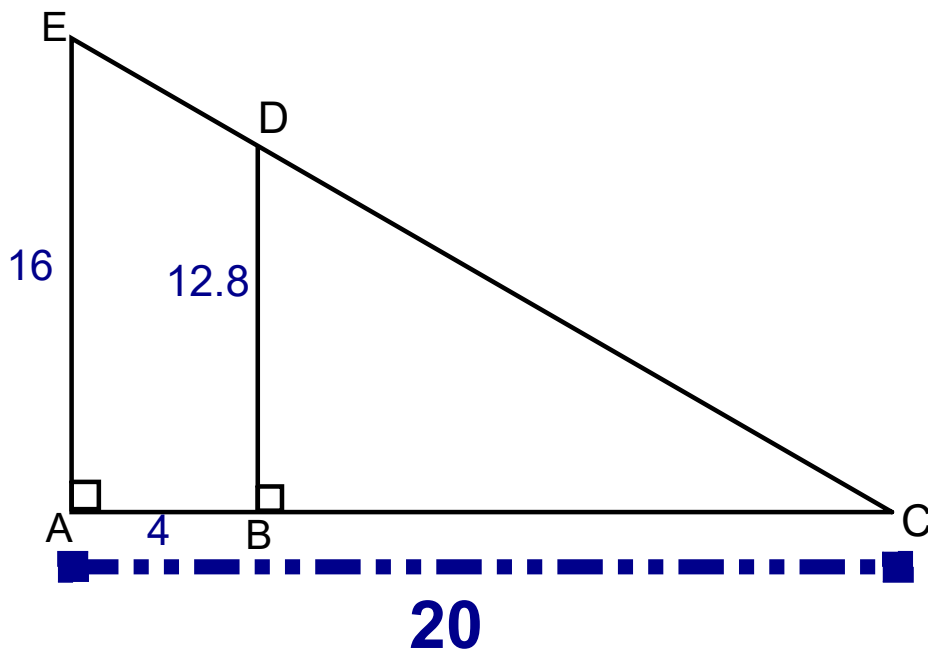
Feb 14-3:04 PM

Final question.....can we use SAS similarity to show these triangles are similar?

7

5

21

15

Feb 14-3:10 PM

Are the triangles similar? If so, state why there are similar.

6)

$\triangle KLM \sim$ _____