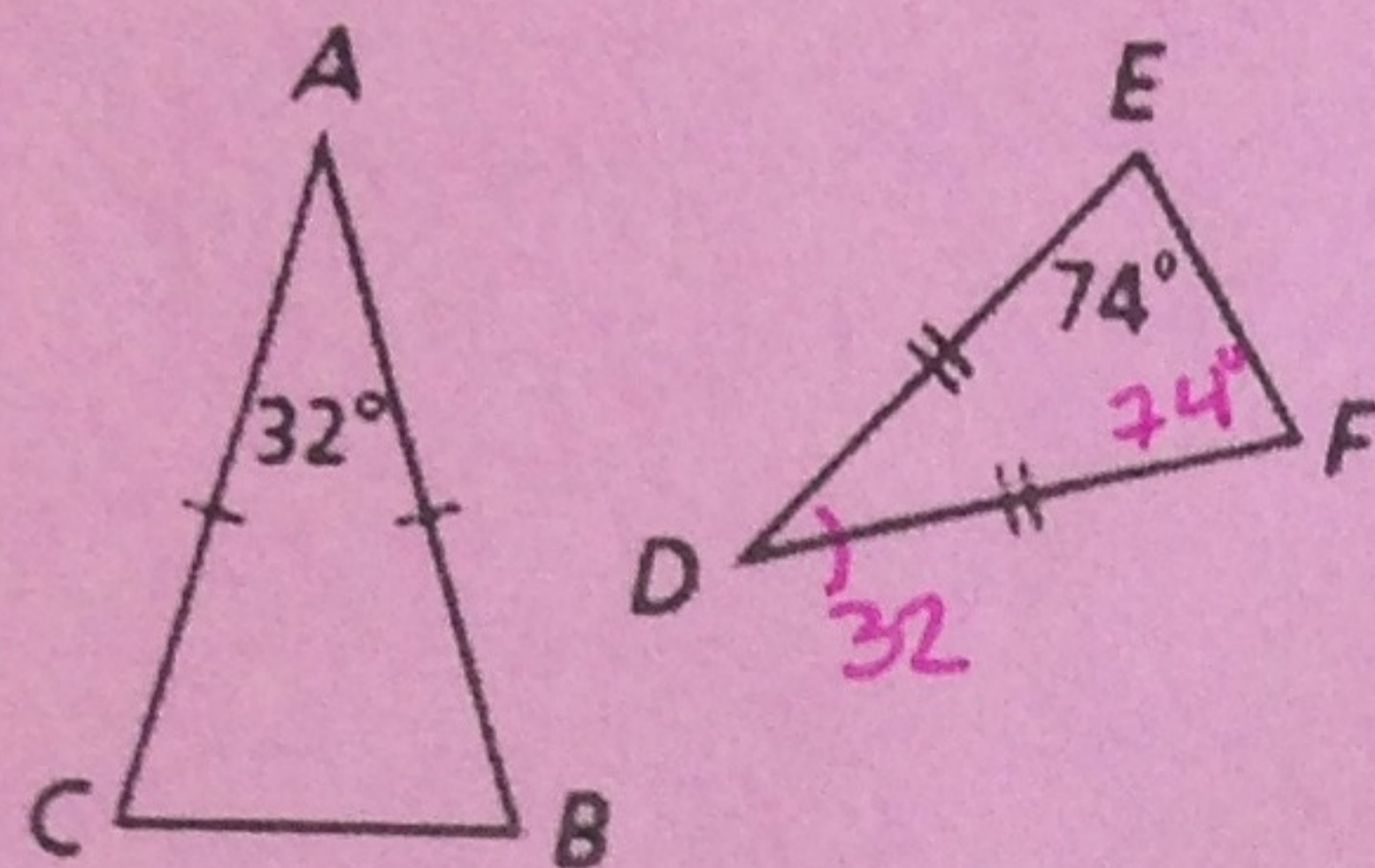


SHOW WORK

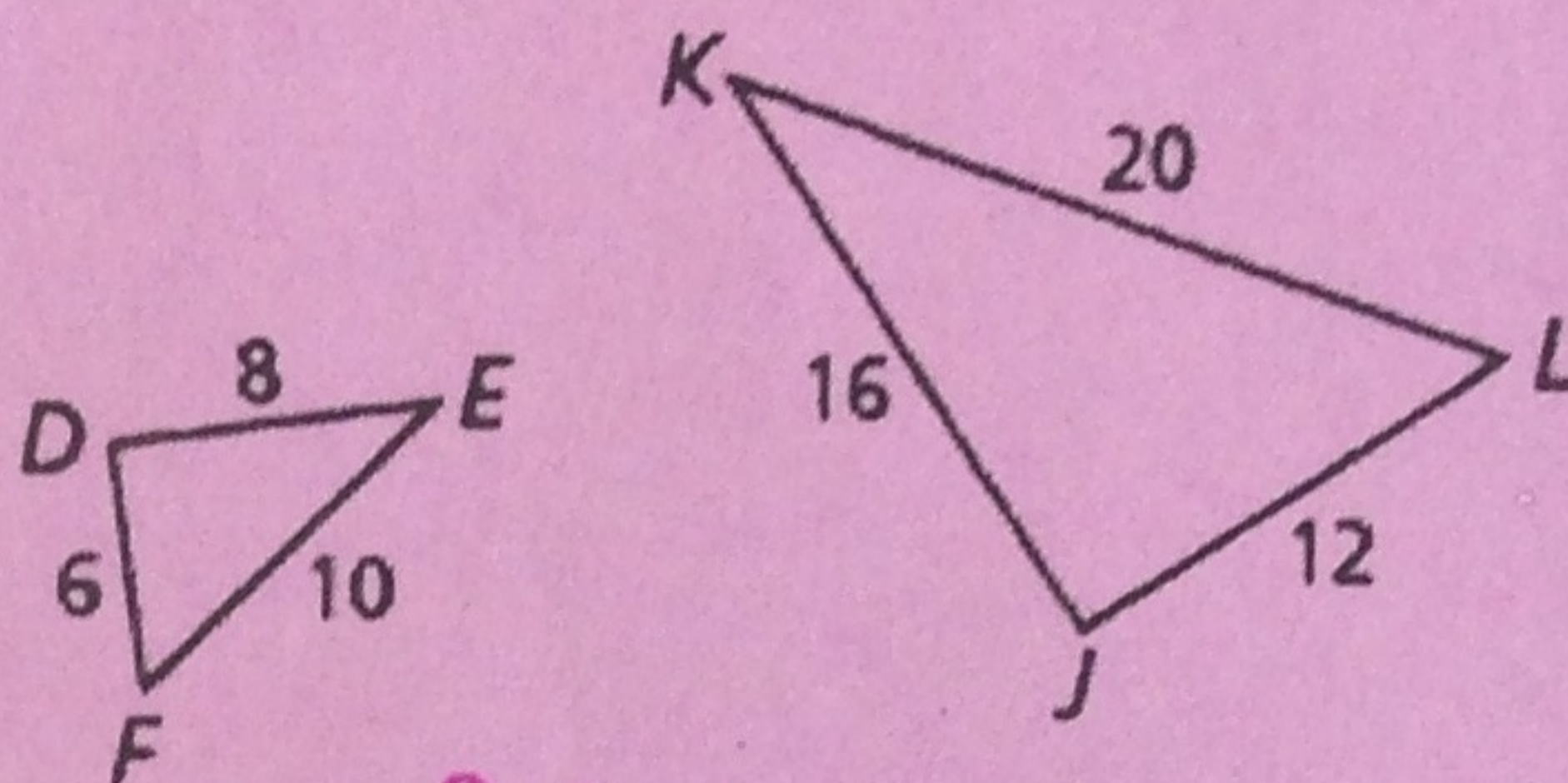
Name the similar triangles and give the similarity (AA, SAS, or SSS) you could use to prove them similar.

1.

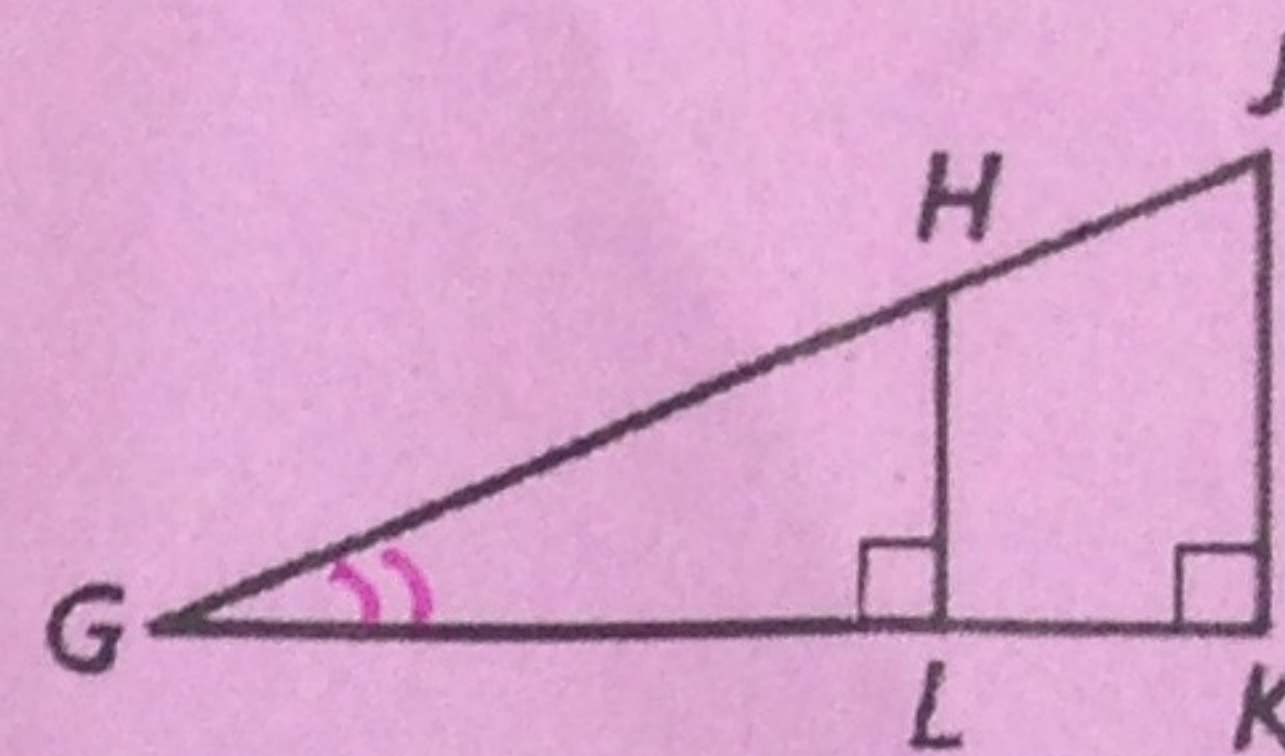


AA ~
 $\triangle CAB \sim \triangle FDE$

2.



SSS ~
 $\triangle DEF \sim \triangle JKL$



AA ~
 $\triangle LGH \sim \triangle KGT$

4. Name the coordinates of the image points using the dilation $(x, y) \rightarrow (4x, 4y)$
 $E(-0.5, 0.5), F(1, -2.5), G(-2, 0.75)$

$E'(-2, 2), F'(4, -10), G'(-8, 3)$

5. $\triangle MNP \sim \triangle QRS$, and the ratio of $\triangle MNP$ to $\triangle QRS$ is 7 : 3. If $MN = 42$ meters, what is QR ?

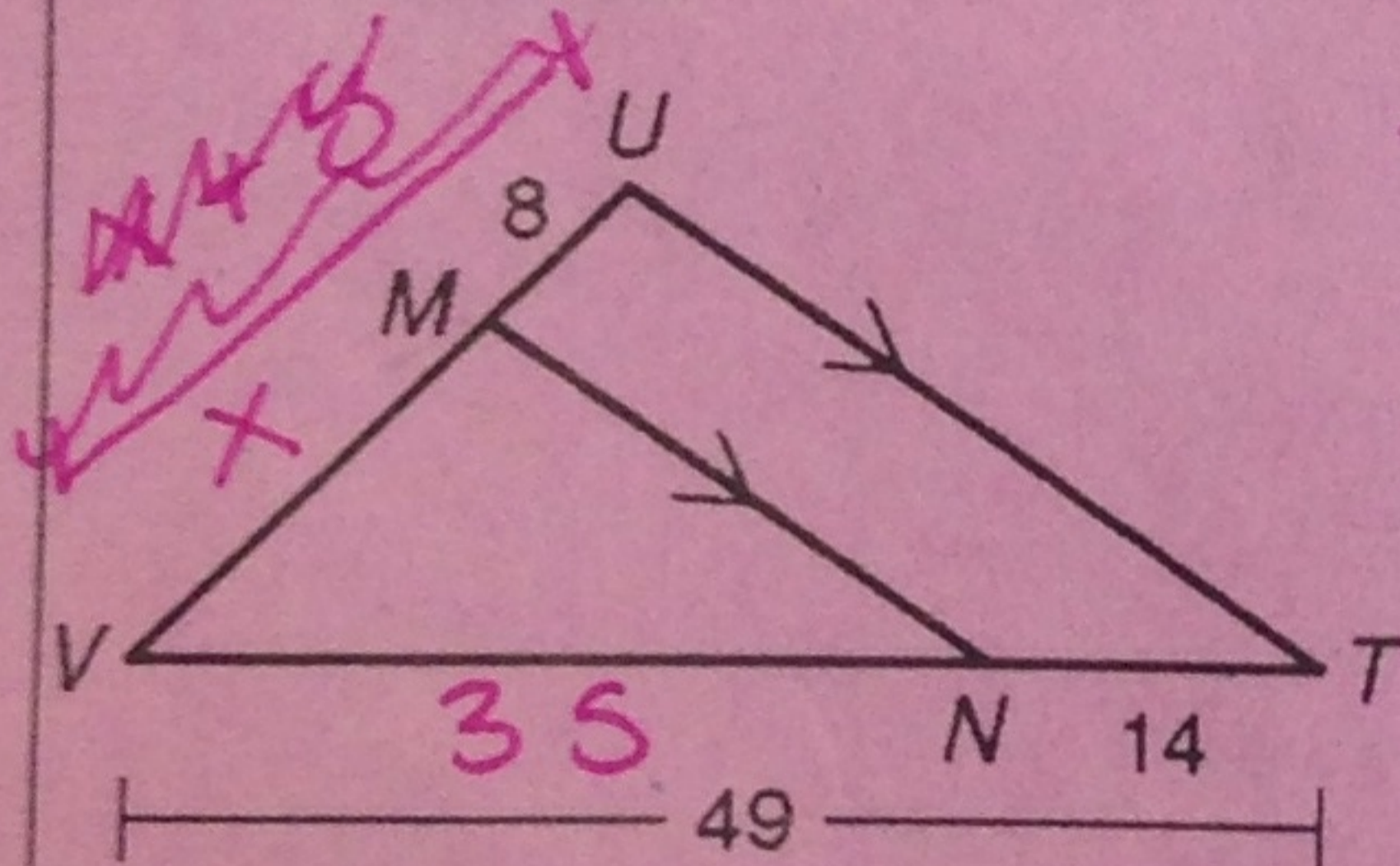
$$\frac{7}{3} = \frac{42}{x}$$

$$7x = 126$$

$$x = 18$$

$$QR = 18$$

6. Find VM .

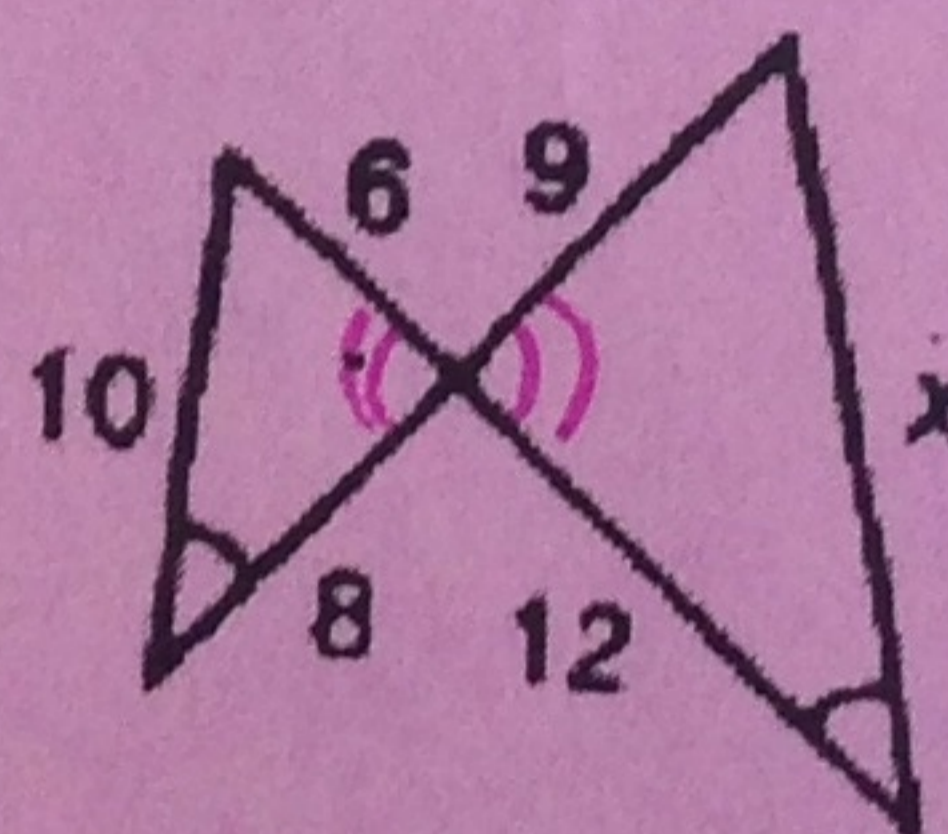


$$\frac{35}{14} = \frac{x}{8}$$

$$280 = 14x$$

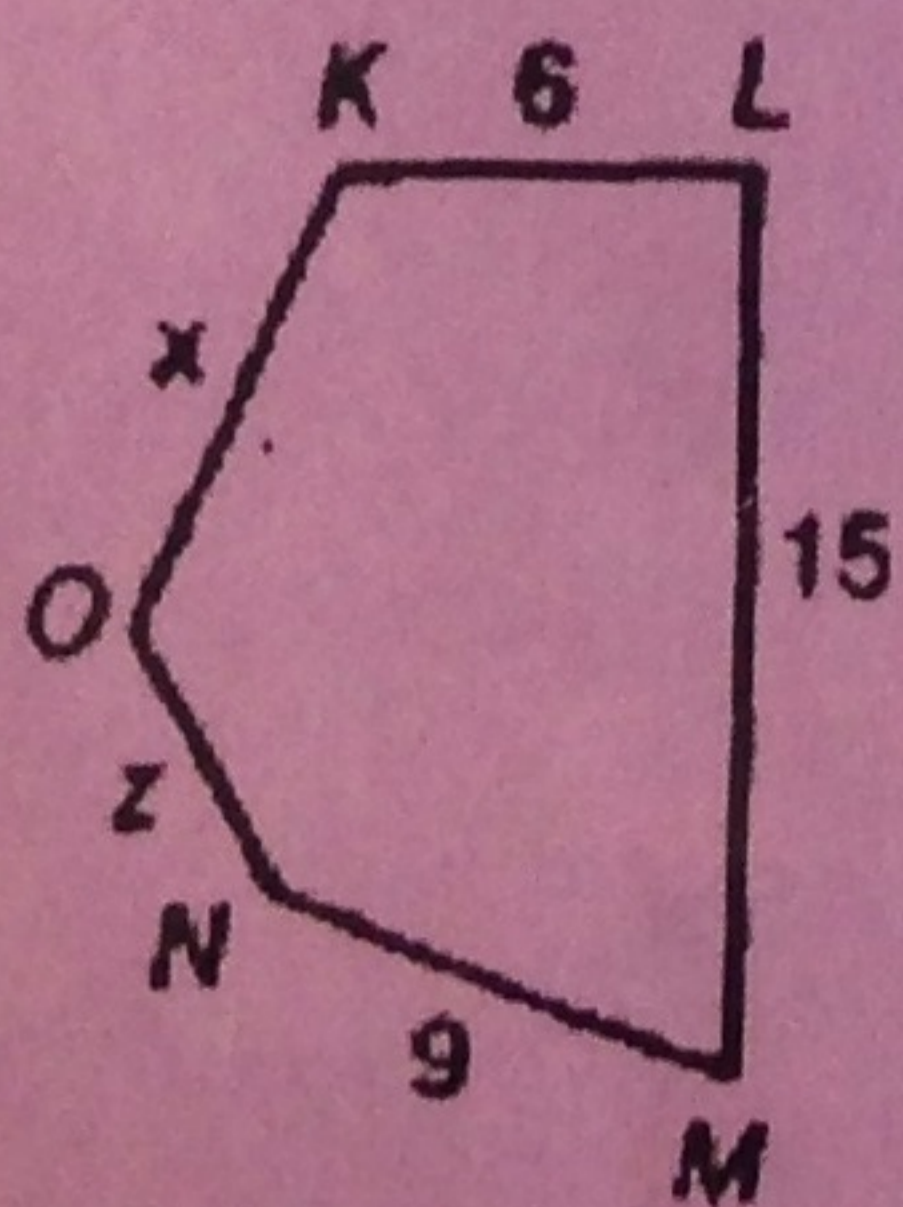
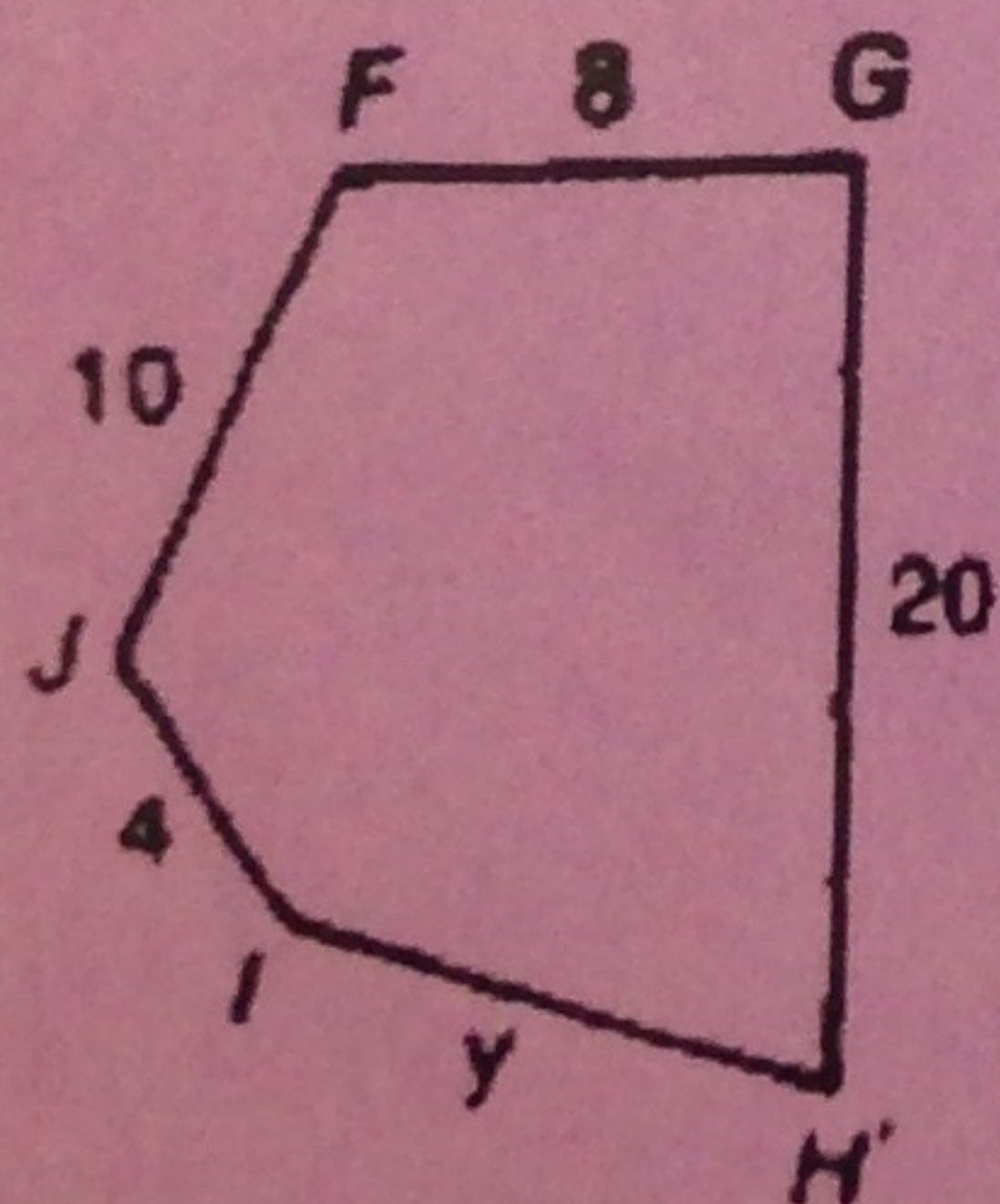
$$20 = x$$

7. Find x .



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

8. Pentagon $FGHIJ \sim$ pentagon $KLMNO$. Find x and y . Give answers in simplest form.



$$\frac{9}{y} = \frac{15}{20}$$

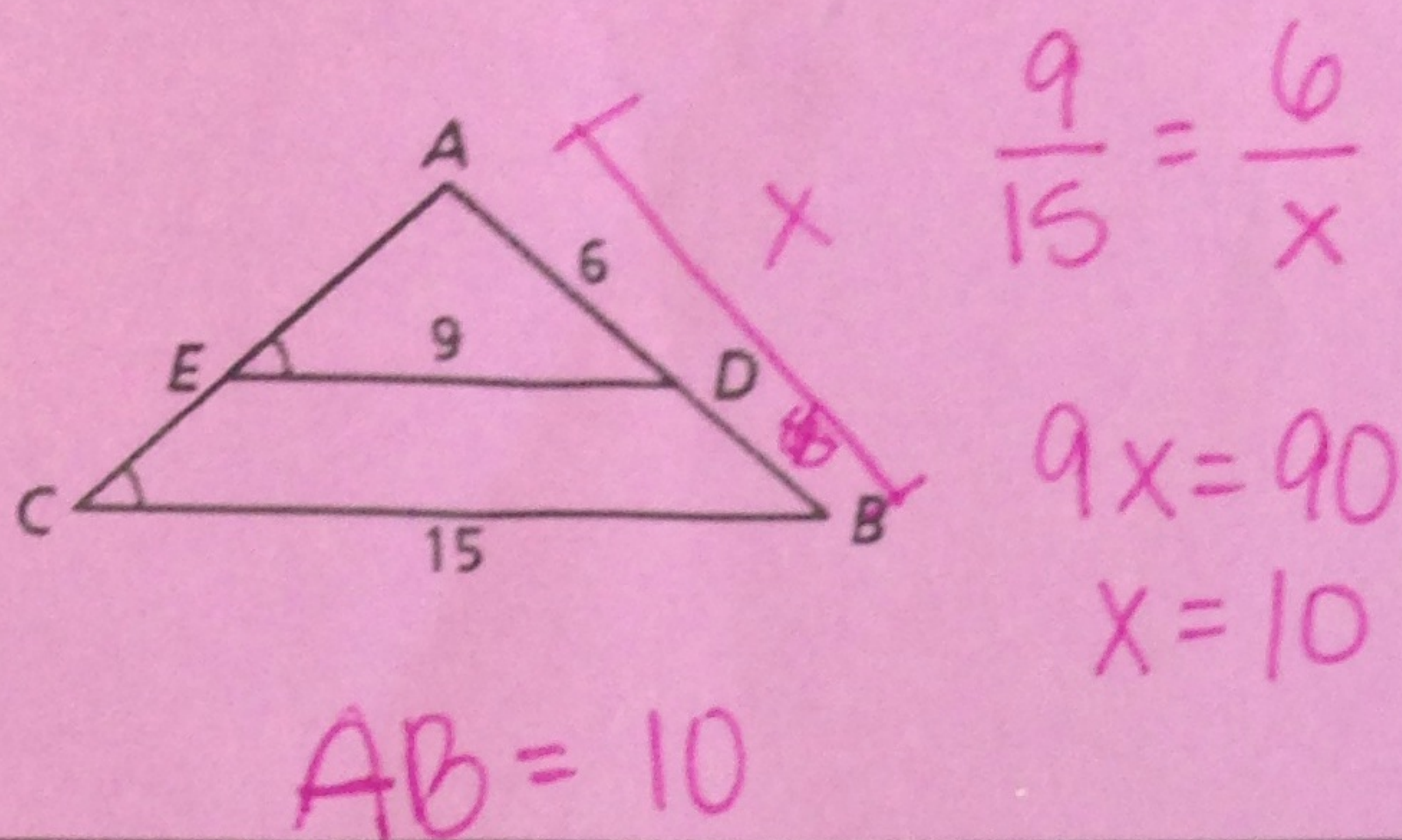
$$180 = 15y$$

$$150 = 20x$$

$$y = 12$$

$$x = 7.5$$

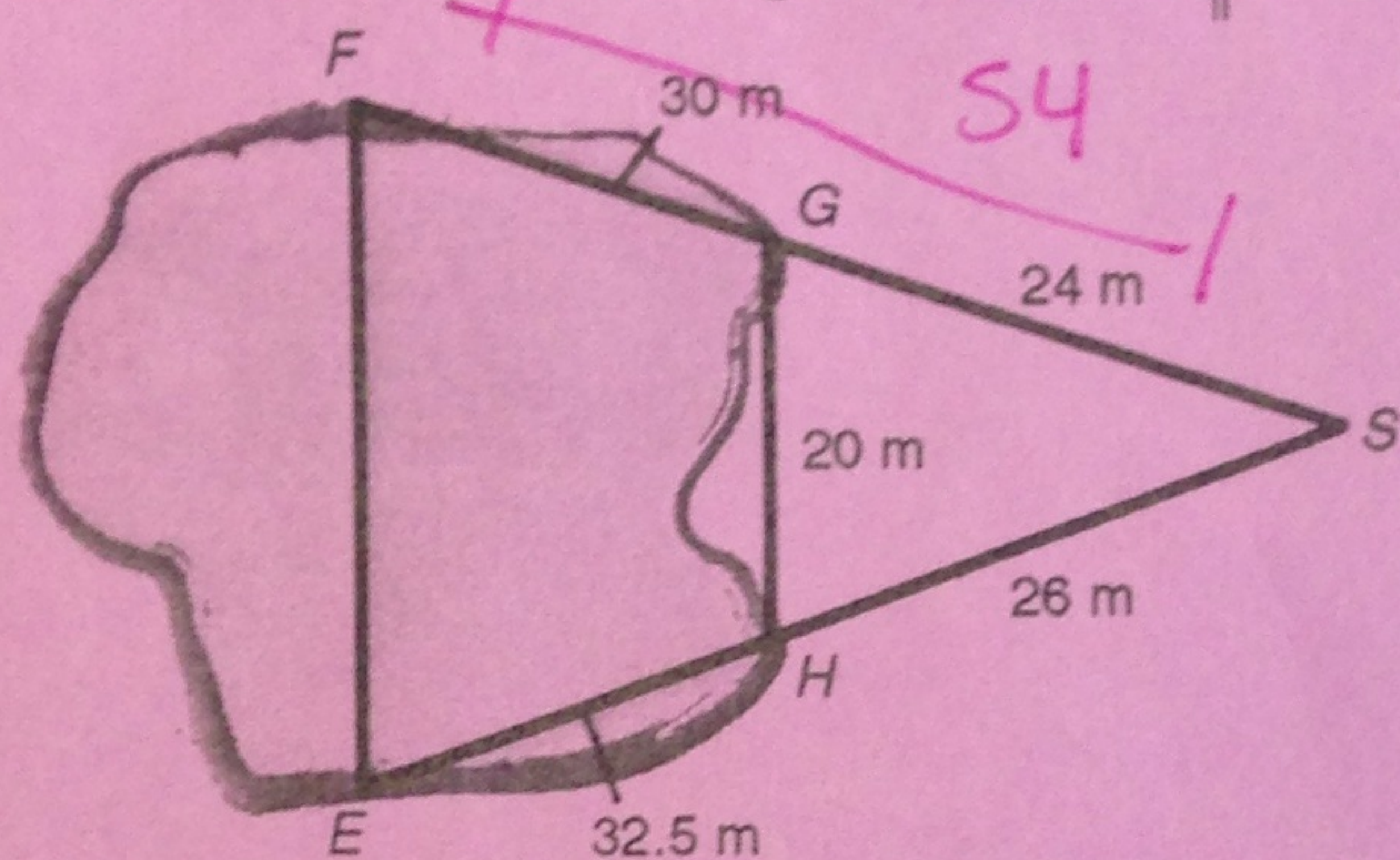
9. Find AB .



10. A visual effects model maker for a movie draws a spaceship using a ratio of 1 : 24. The drawing of the spaceship is 22 inches long. What is the length of the spaceship in the movie? Give the answer in feet.

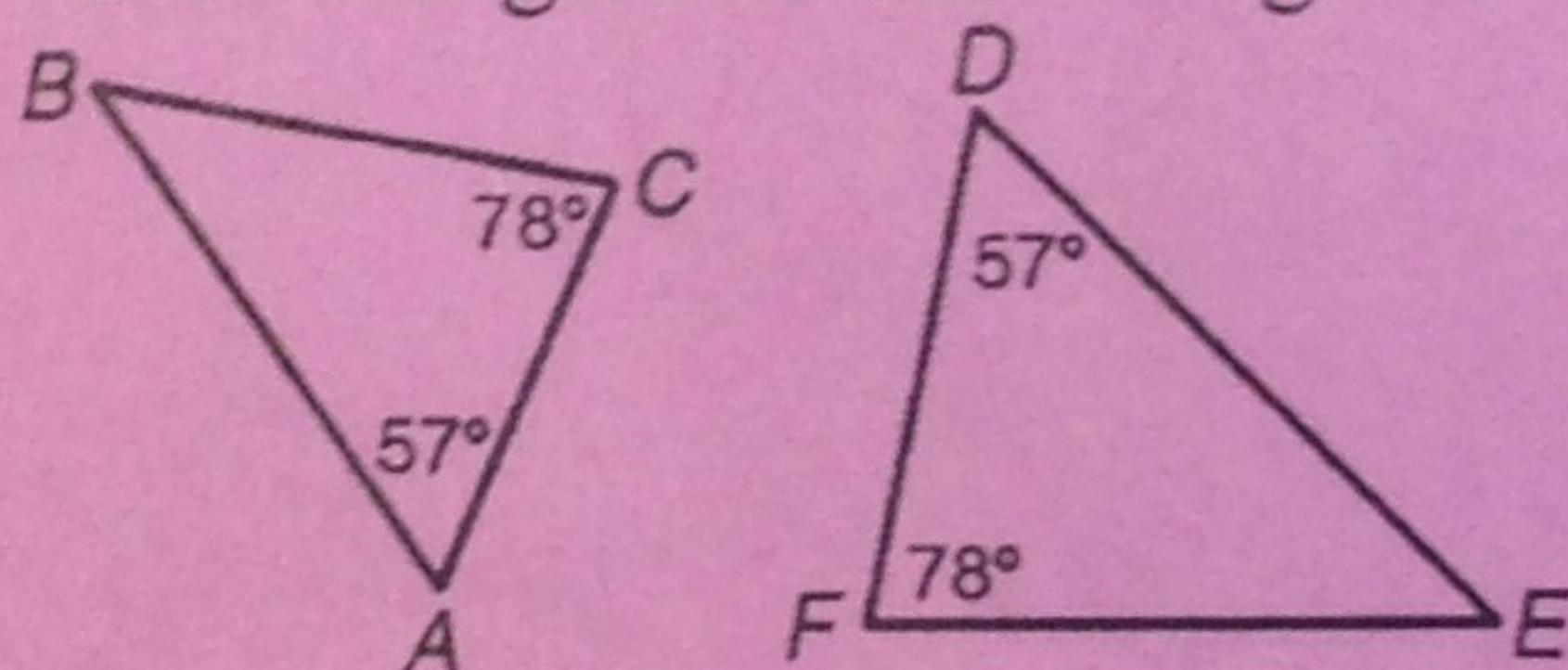
$\frac{1}{24} = \frac{22}{x}$
 $x = 528 \text{ in}$

11. To measure the distance EF across the lake, a surveyor at S locates points $E, F, G,$ and H as shown. What is EF , given that $\overline{EF} \parallel \overline{HG}$?

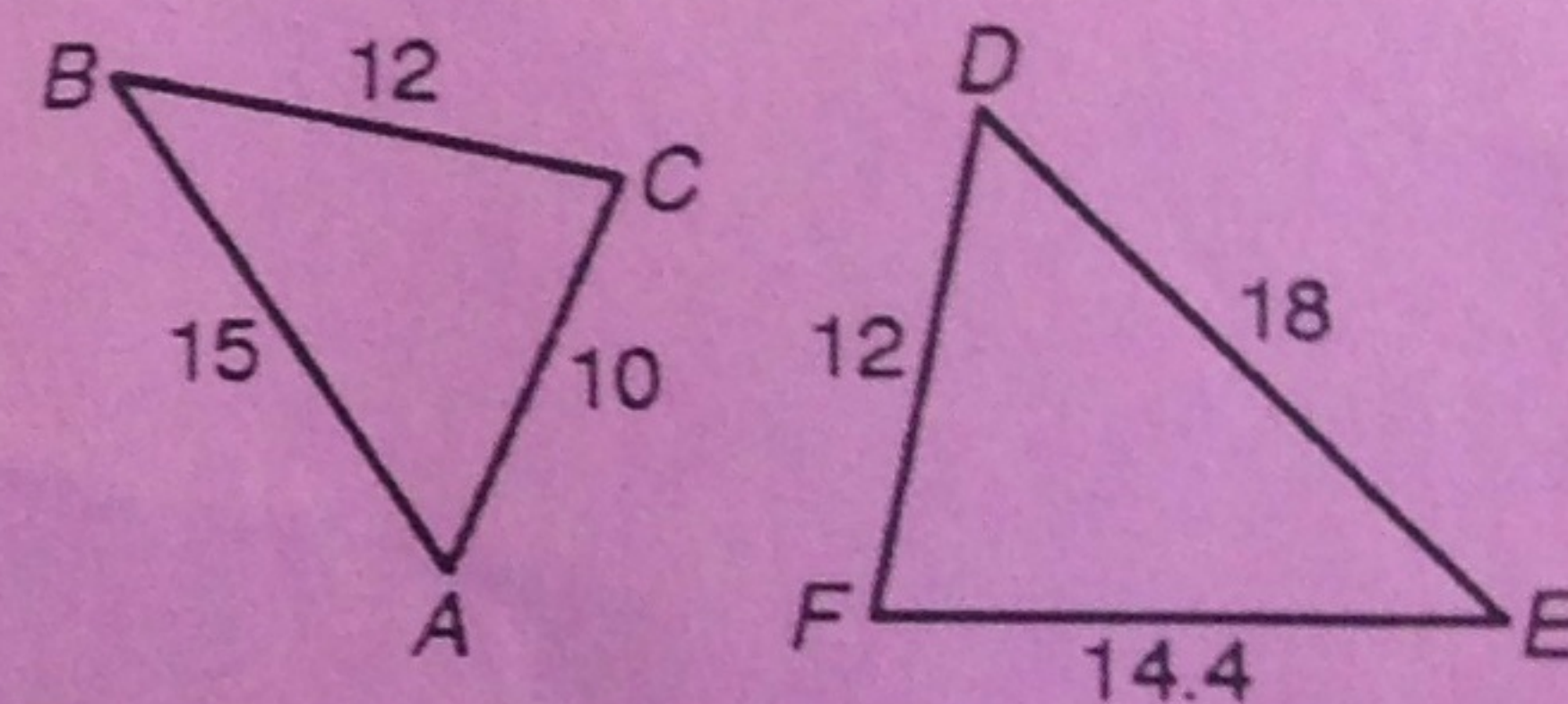


$\frac{20}{x} = \frac{24}{54}$
 $1080 = 24x$
 $x = 45 \text{ m}$

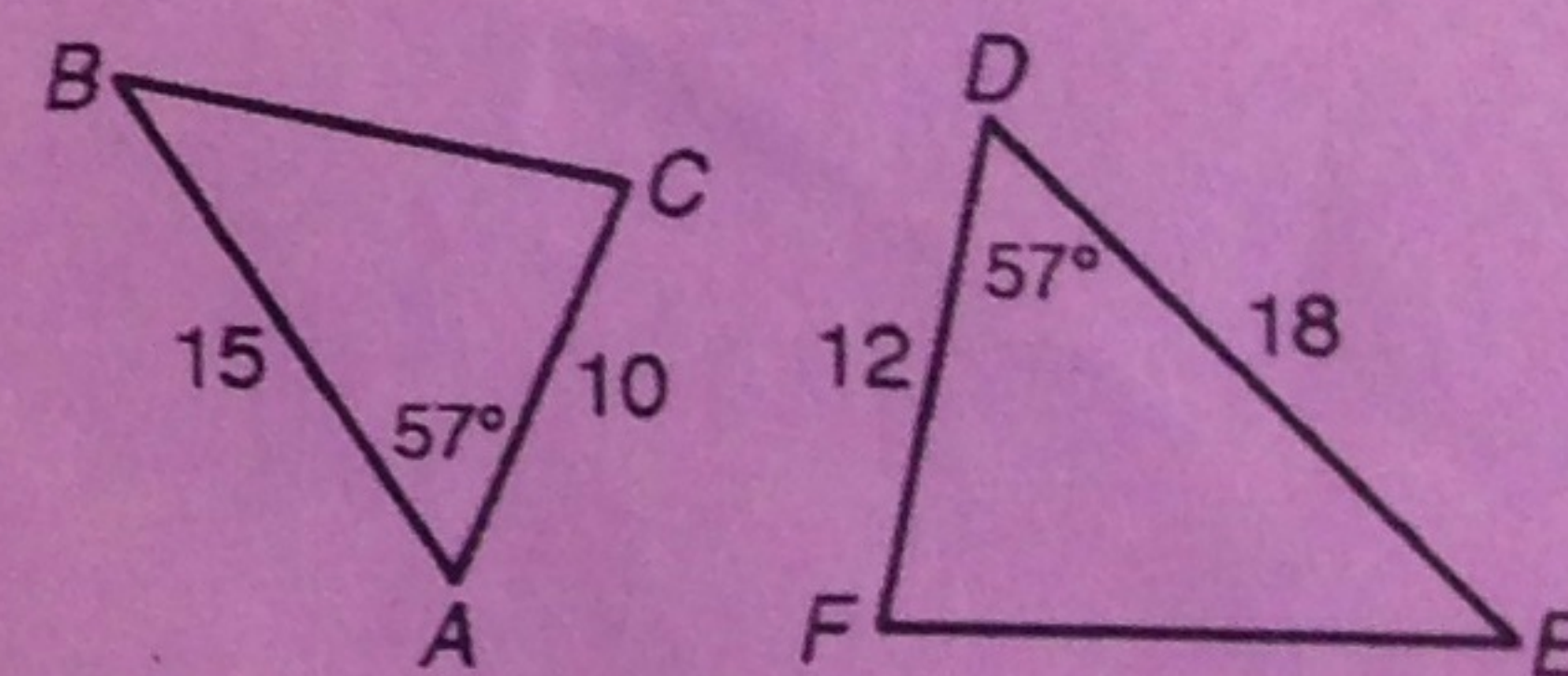
Angle-Angle (AA) Similarity If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.



Side-Side-Side (SSS) Similarity If the three sides of one triangle are proportional to the three corresponding sides of another triangle, then the triangles are similar.



Side-Angle-Side (SAS) Similarity If two sides of one triangle are proportional to two sides of another triangle and their included angles are congruent, then the triangles are similar.



If a line parallel to a side of a triangle intersects the other two sides, then it divides those sides proportionally.

