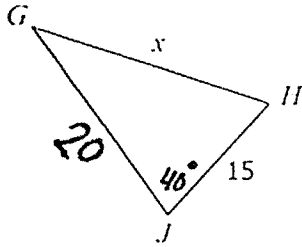
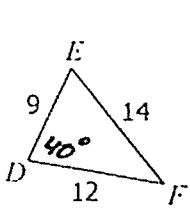


1. Find x.



Similar? (Evidence)

Yes, SAS $\angle D \cong \angle I$
 $\frac{12}{20} = \frac{9}{15}$

Solving for?

Side x

Property:

Corresponding sides are proportional

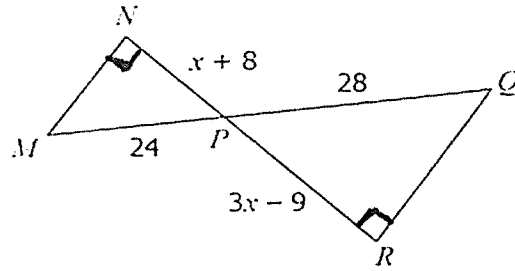
Equation:

$$\frac{x}{14} = \frac{15}{9}$$

Solve:

$$x = 23.3$$

2. Find NP.



Similar? (Evidence)

Yes AA $\angle N \cong \angle R$
 $\angle NPH \cong \angle RPA$ (vertical)

Solving for?

NP

Property:

Corresponding sides are proportional

Equation:

$$\frac{24}{28} = \frac{x+8}{3x-9}$$

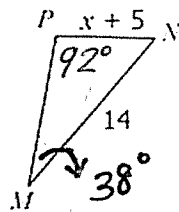
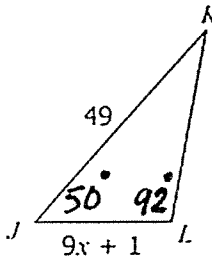
Solve:

$$x = 10.9 \quad NP = 18$$

3. Find PN.

Similar? (Evidence)

Yes, AA $\angle P \cong \angle L$
 $\angle J \cong \angle N$



Solving for?

PN

Property:

Corresponding sides are prop.

Equation:

$$\frac{9x+1}{x+5} = \frac{49}{14}$$

Solve:

$$126x + 14 = 49x + 245$$

$$\frac{77x}{77} = \frac{231}{77}$$

$$x = 3$$

$$PN = 8$$

4. Find AC.

Similar? (Evidence)

Yes, Altitude Theorem

Solving for?

AC

Property:

Geometric mean

Equation:

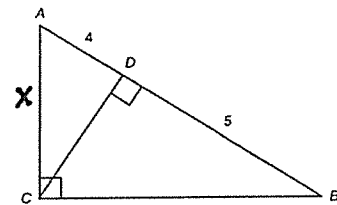
$$\frac{x}{4} = \frac{9}{x}$$

Solve:

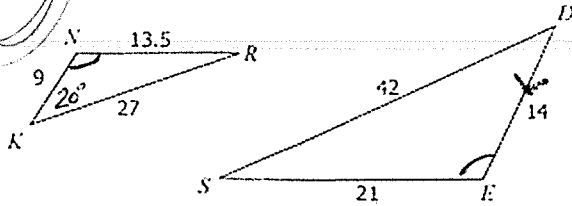
$$x^2 = 36$$

$$x^2 = \sqrt{36}$$

$$x = 6$$



5. Find $m\angle E$ if $m\angle K=20^\circ$; $m\angle N=7x-15$ and $m\angle E=5x+11$



Similar? (Evidence)

Yes, SSS $\frac{9}{14} = \frac{13.5}{21} = \frac{27}{42}$

Solving for?

$m\angle E$

Property:

Corresponding angles are Congruent

Equation:

$$7x - 15 = 5x + 11$$

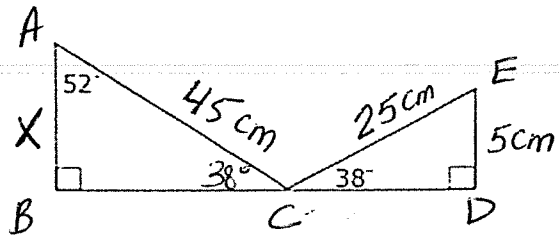
Solve:

$$2x = 26$$

$$x = 13$$

$$m\angle E = 76^\circ$$

6. Find AB.



Similar? (Evidence)

Yes, AA $\angle B \cong \angle D$
 $\angle ACB \cong \angle ECD$

Solving for?

AB

Property:

Corresponding Sides are Congruent

Equation:

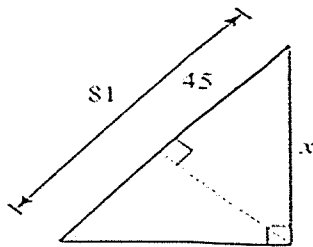
$$\frac{x}{5} = \frac{45}{25}$$

Solve:

$$25x = 225$$

$$x = 9$$

7. Find x.



Similar? (Evidence)

yes, Altitude theorem

Solving for?

Side x

Property:

Geometric mean

Equation:

$$\frac{x}{81} = \frac{45}{x}$$

Solve:

$$x^2 = 3645$$

$$x = 60.37$$

List all theorems/postulates that show two triangles are similar:

SAS, SSS, AA

Altitude theorem

List all possible properties that helps you set up an equation/proportion

- * Corresponding sides are proportional
- * Corresponding angles are congruent
- * Geometric mean.