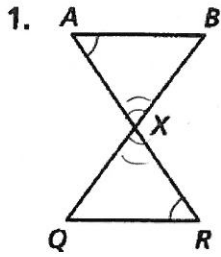


Name: _____

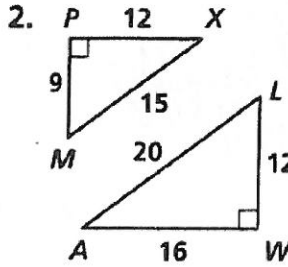
AKC

8.3 Practice Problems

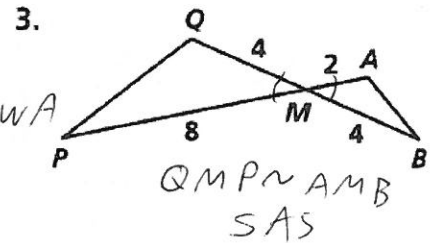
Explain why the triangles are similar. Write a similarity statement for each pair.



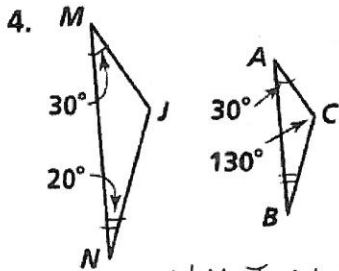
AA
 $\triangle ABX \sim \triangle RQX$



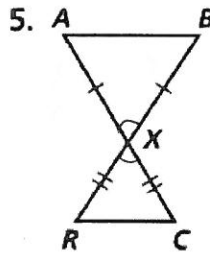
SSS
 $\triangle MPX \sim \triangle LWA$



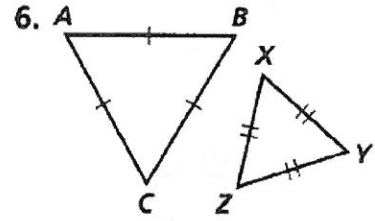
SAS
 $\triangle QMP \sim \triangle AMB$



AA
 $\triangle NMJ \sim \triangle BAC$



SAS
 $\triangle ABX \sim \triangle RCX$



SSS
 $\triangle ABC \sim \triangle XYZ$

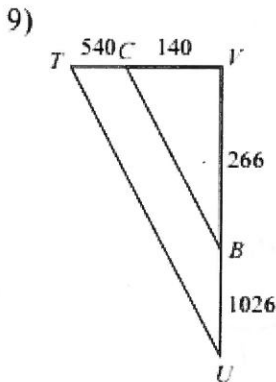
In Exercises 7 and 8, verify that $\triangle ABC \sim \triangle DEF$.

Find the scale factor of $\triangle ABC$ to $\triangle DEF$.

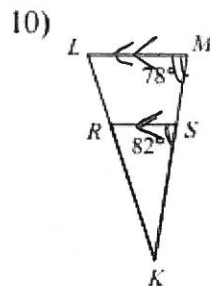
7. $\triangle ABC: BC = 18, AB = 15, AC = 12$
 $\triangle DEF: EF = 12, DE = 10, DF = 8$
 $\frac{15}{10} = \frac{18}{12} = \frac{12}{8} \checkmark$ S.F. = $\frac{3}{2}$

8. $\triangle ABC: AB = 10, BC = 16, CA = 20$
 $\triangle DEF: DE = 25, EF = 40, FD = 50$
 $\frac{10}{25} = \frac{16}{40} = \frac{20}{50} \checkmark$ S.F. = 2.5

State if the triangles are similar and the theorem that proves they are.



$\frac{140}{540 + 140} = \frac{266}{266 + 1026} \checkmark$

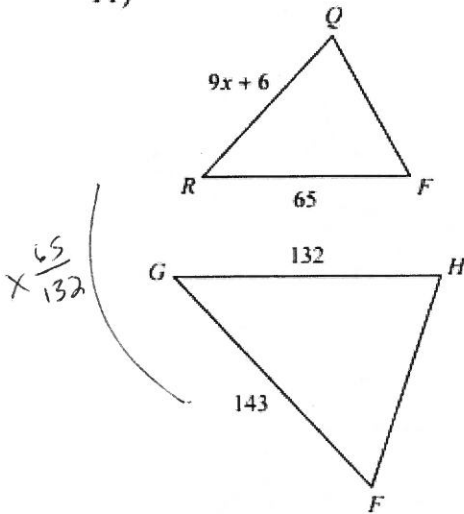


- A) similar; AA similarity
- B) similar; SAS similarity
- C) similar; SSS similarity
- D) not similar

- A) similar; SSS similarity
- B) similar; SAS similarity
- C) similar; AA similarity
- D) not similar

Solve for x. The triangles in each pair are similar.

11)

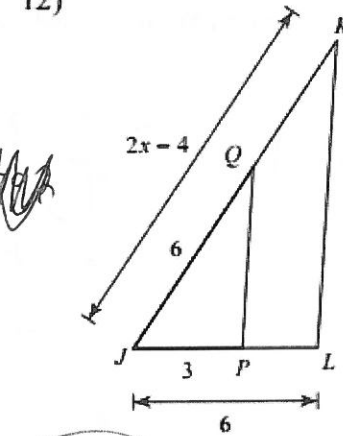


~~Handwritten scribbles and equations:~~
 $9x+6 = 132$
 $9x = 126$
 $x = 14$

$$\frac{9x+6}{65} = \frac{132}{143}$$

- A) 9
- B) 10
- C) 14
- D) 6

12)



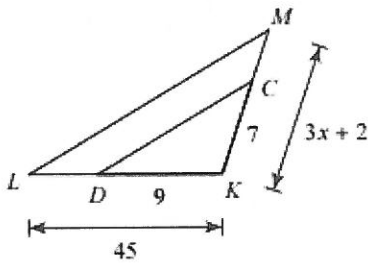
$$2x-4=12$$

$$2x=16$$

$$x=8$$

- A) 8
- B) 3
- C) 6
- D) 4

13)



$$\frac{7}{3x+2} = \frac{9}{45}$$

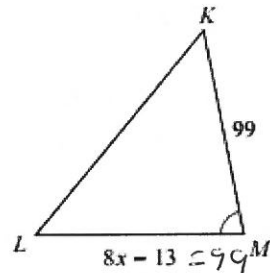
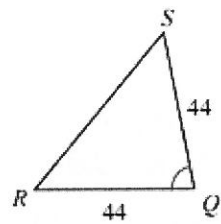
$$315 = 27x + 18$$

$$297 = 27x$$

$$11 = x$$

- A) 13
- B) 8
- C) 11
- D) 6

14)

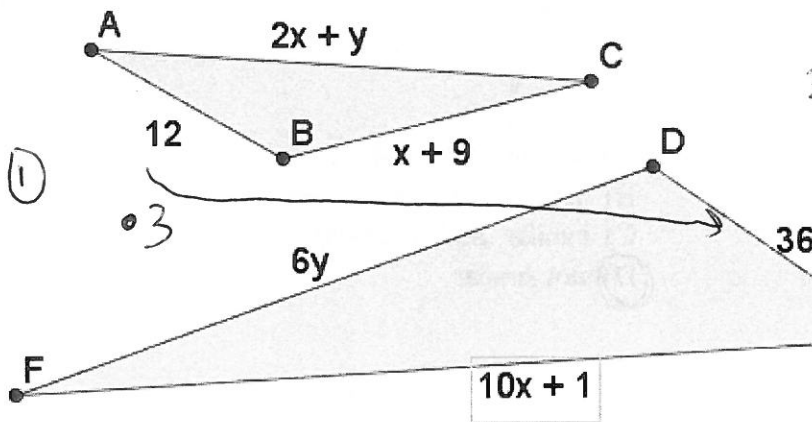


$$8x = 112$$

$$x = 14$$

- A) 11
- B) 4
- C) 8
- D) 14

15. Find the perimeter of both triangles given $ABC \sim EDF$



$$3(x+9) = 6y$$

$$3x + 9 = 6y$$

$$3x - 6y = -9$$

$$3(2x+y) = 10x+1$$

$$6x + 3y = 10x + 1$$

$$-4x + 3y = 1$$

$$x=5$$

$$y=7$$