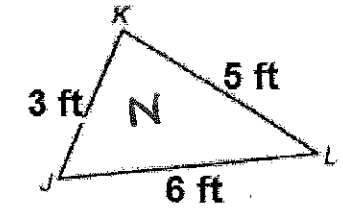
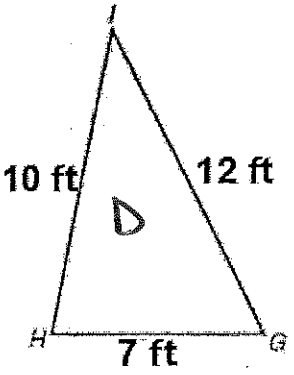
**Similarity Practice** Name: Key

**Determine if the following triangles are similar. Justify your answer.**

**1.**



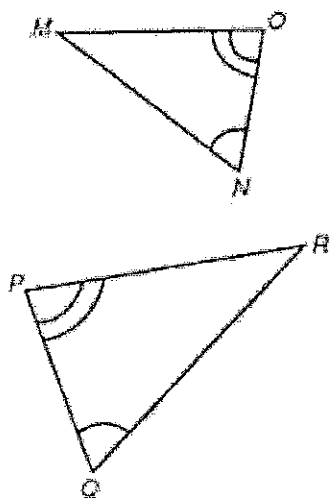




$\frac{3}{7}$ $\frac{5}{10}$ $\frac{6}{12}$

(.4) (.5) (.5)

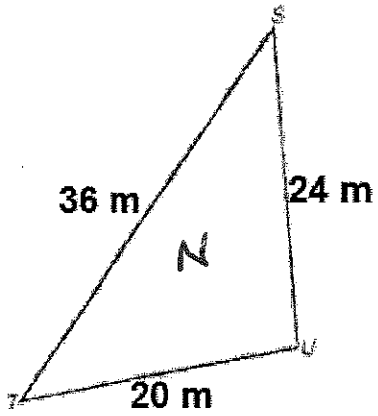
NOT similar

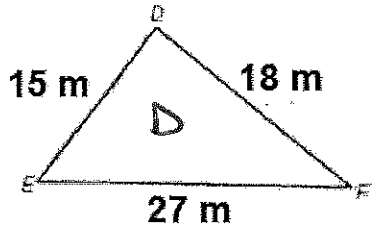
**2.**




similar using AA sim. Th.

**3.**



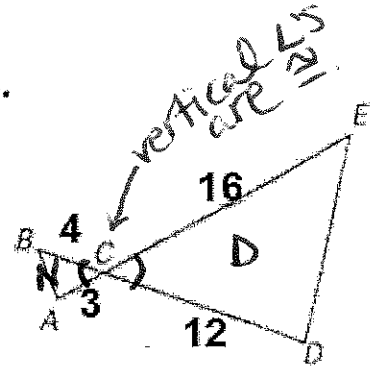




$\frac{20}{15}$ $\frac{24}{18}$ $\frac{36}{27}$

(1.3) (1.3) (1.3)

similar using SSS sim. Th.

**4.**

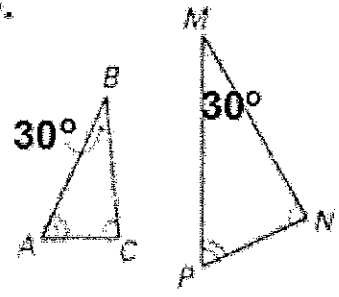



$\frac{3}{12}$ $\frac{4}{16}$

(.25) (.25)

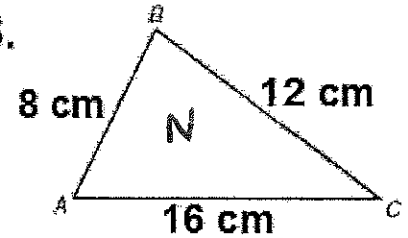
similar using SAS sim. Th.

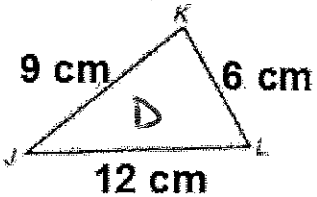
**5.**




similar using AA sim. Th.

**6.**



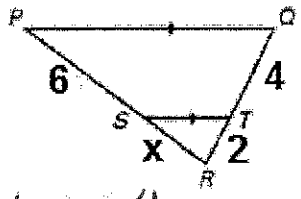

$\frac{8}{6}$ $\frac{12}{9}$ $\frac{16}{12}$

(1.3) (1.3) (1.3)

similar using SSS sim. Th.

**Use the triangle proportionality theorem to solve for x.**

**7.**

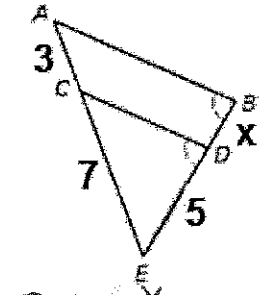



$\frac{6}{x} = \frac{4}{2}$

$\frac{4x}{4} = \frac{12}{4}$

$x = 3$

**8.**

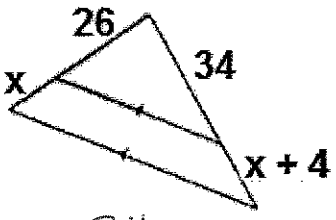



$\frac{3}{7} = \frac{x}{5}$

$\frac{7x}{7} = \frac{15}{7}$

$x = 2.14$

**9.**




$\frac{26}{x} = \frac{34}{x+4}$

$34x = 26(x+4)$

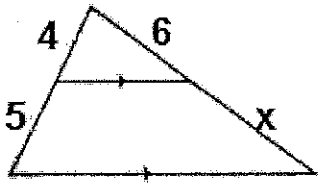
$34x = 26x + 104$

$-26x \quad -26x$

$\frac{8x}{8} = \frac{104}{8}$

$x = 13$

**10.**

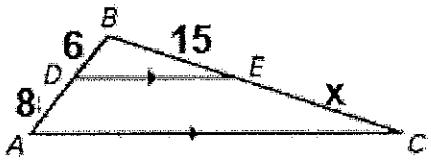



$\frac{4}{5} = \frac{6}{x}$

$\frac{4x}{4} = \frac{30}{4}$

$x = 7.5$

**11.**

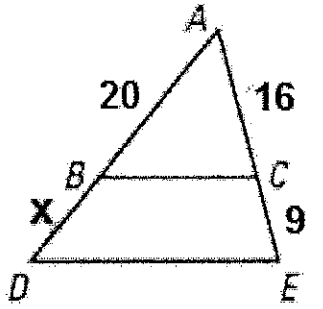



$\frac{6}{8} = \frac{15}{x}$

$\frac{6x}{6} = \frac{120}{6}$

$x = 20$

**12.**



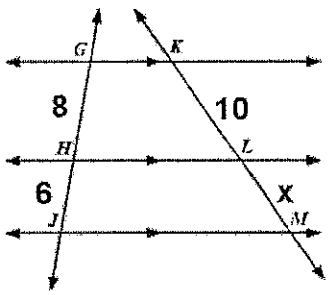

$\frac{20}{x} = \frac{16}{9}$

$\frac{16x}{16} = \frac{180}{16}$

$x = 11.25$

**Given that the following transversals are cut by parallel lines, find the missing values.**

**13.**

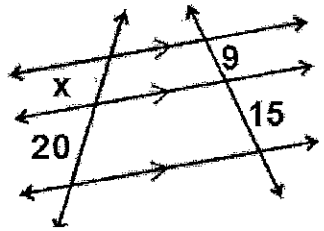



$\frac{8}{6} = \frac{10}{x}$

$\frac{8x}{8} = \frac{60}{8}$

$x = 7.5$

**14.**

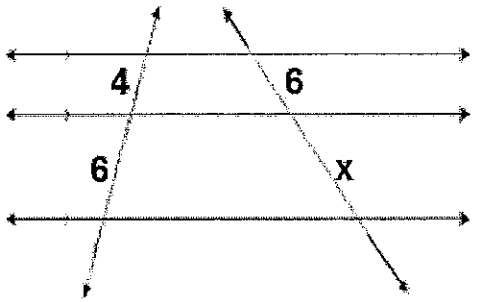



$\frac{x}{20} = \frac{9}{15}$

$\frac{15x}{15} = \frac{180}{15}$

$x = 12$

**15.**




$\frac{4}{6} = \frac{6}{x}$

$\frac{4x}{4} = \frac{36}{4}$

$x = 9$