NAME Key DATE _____ SCORE _____

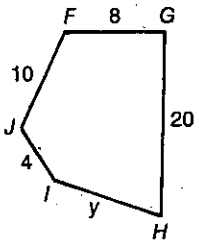
Practice 28
Chapter 7 Practice

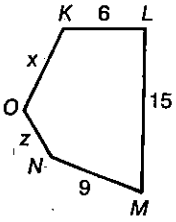
Complete each statement.

1. If $\frac{a}{b} = \frac{c}{d}$, then $\frac{d}{c} =$ b/a.
2. If $\frac{y}{3} = \frac{2}{z}$, then $\frac{y}{2} =$ $3/z$.
3. If $\frac{x}{7} = \frac{b}{2}$, then $\frac{x+7}{7} =$ $b+2/2$.
4. If $\frac{x}{15} = \frac{2}{5}$, then $x =$ 6.
5. If $\frac{x+5}{x-5} = \frac{5}{3}$, then $x =$ 20.
6. If $\frac{x-1}{2x+7} = \frac{1}{3}$, then $x =$ 10.

$3x+15 = 5x-25$, $40 = 2x$; $3x-3 = 2x+7$, $x = 10$

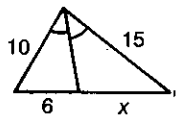
7. Pentagon $FGHIJ \sim$ pentagon $KLMNO$.
   a. The scale factor of $FGHIJ$ to $KLMNO$ is $8/6 = 4/3$.
   b. The value of $x =$ $30/4$. $\frac{4}{3} = \frac{10}{x}$
   c. The value of $y =$ 12. $\frac{4}{3} = \frac{y}{9}$
   d. The value of $z =$ 3. $\frac{4}{8} = \frac{4}{2}$





Find the value of x.

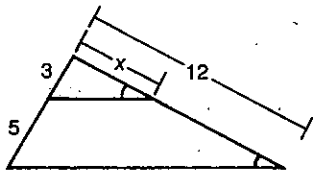
8.



$\frac{10}{6} = \frac{15}{x}$

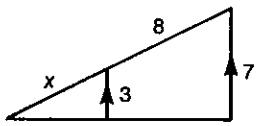
$x =$ 9

9.



$x =$ 4.5 $\frac{3}{8} = \frac{x}{12}$

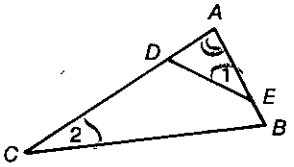
10.



$x =$ 6 $\frac{3}{x} = \frac{7}{8+x}$; $7x = 24+3x$; $4x = 24$

11. Given: $\angle 1 \cong \angle 2$

Prove: $\frac{AD}{AB} = \frac{AE}{AC}$



1. $\angle 1 \cong \angle 2$	1. Given
2. $\angle A \cong \angle A$	2. Refl.
3. $\triangle EAD \sim \triangle CAB$	3. AA $\sim$ post.
4. $\frac{AD}{AB} = \frac{AE}{AC}$	4. corr. sides $\sim$ $\triangle$s prop.

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Similar Polygons

For use after Chapter 7

Write the algebraic ratio in simplest form.

1. $\frac{6x^2y}{24xy^2}$ $\frac{x}{4y}$

2. $\frac{a(x-2)}{5(x-2)}$ $\frac{a}{5}$

3. $\frac{x+6}{4x+24}$ $\frac{1}{4}$

Complete.

4. If $\frac{x}{2} = \frac{4}{5}$, then $5x =$ 8.

5. If $\frac{x}{y} = \frac{4}{5}$, then $\frac{y}{x} =$ 5/4.

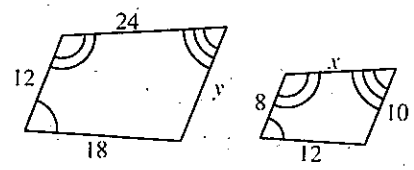
Find the value of x.

6. $\frac{x}{5} = \frac{16}{20}$ $x =$ 4

7. $\frac{x-3}{4} = \frac{9}{8}$ $x =$ 7.5 $8x - 24 = 36$

Two similar polygons are shown. Find the values of x and y.

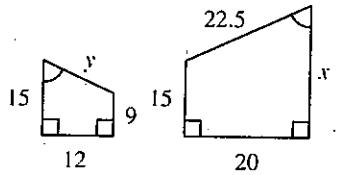
8.



$\frac{12}{8} = \frac{24}{x}$

$x =$ 16; $y =$ 15 $\frac{12}{8} = \frac{18}{10}$

9.

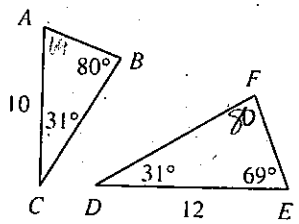


$\frac{9}{15} = \frac{15}{x}$

$x =$ 25; $y =$ 13.5 $\frac{9}{15} = \frac{y}{22.5}$

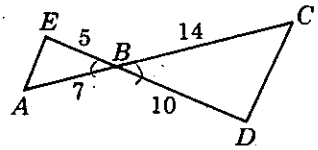
Name two similar triangles. Also name the theorem or postulate that justifies your answer.

10.



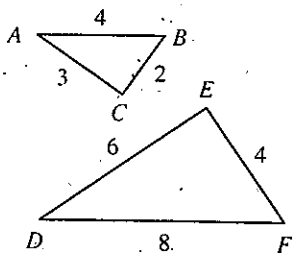
$\triangle ABC \sim \triangle EFD$; AA

11.



$\triangle ABE \sim \triangle CBD$; SAS

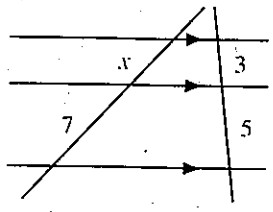
12.



$\triangle ABC \sim \triangle DFE$; SSS

Find the value of x.

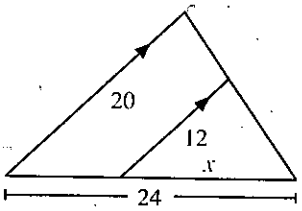
13.



$x =$ 4.2

$\frac{3}{x} = \frac{5}{7}$ $21 = 5x$

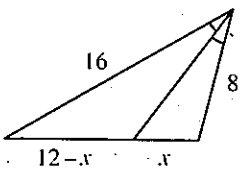
14.



$x =$ 14.4

$\frac{x}{24} = \frac{12}{20}$

15.



$x =$ 4

$\frac{16}{12-x} = \frac{8}{x}$

$16x = 96 - 8x$

$24x = 96$