

Cumulative Review, Chapters 7-8 Part 1

Complete.

1. In simplest form, $\frac{4x^2}{12xy^2} = \frac{x}{3y}$.

2. In simplest form, $\frac{y+4}{8y+32} = \frac{1}{8}$.

3. If $\frac{x}{6} = \frac{16}{24}$, then $x = 4$.

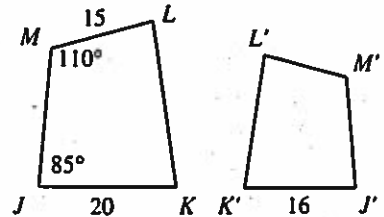
4. If $\frac{a}{7} = \frac{5}{9}$, then $\frac{a+7}{7} = \frac{14}{9}$.

In Exercises 5-7 quad. JKLM ~ quad. J'K'L'M'.

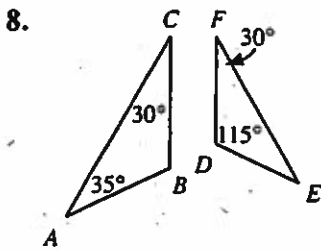
5. Find $M'L'$. 12

6. Find $m\angle J'$. 85

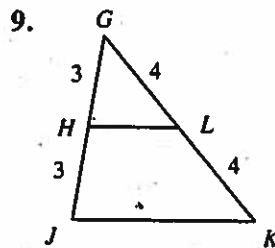
7. What is the scale factor of quad. JKLM to quad. J'K'L'M'? 5:4



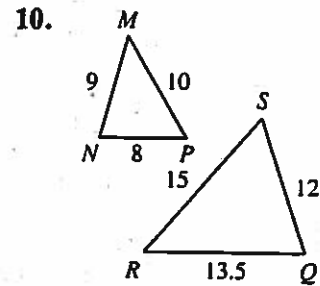
Name two similar triangles. Also name the theorem or postulate that justifies your answer.



$\triangle ABC \sim \triangle DEF$
AA ~

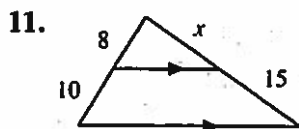


$\triangle GHL \sim \triangle GJK$
SAS ~

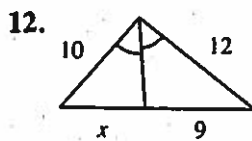


$\triangle MNP \sim \triangle RQS$
SSS ~

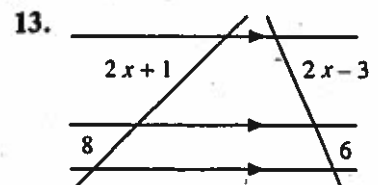
Find the value of x .



$x = 12$



$x = 7.5$



$x = 7.5$

Simplify.

14. $\sqrt{80}$ $4\sqrt{5}$

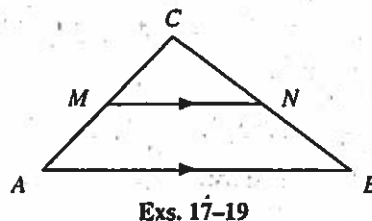
15. $\frac{4}{\sqrt{8}}$ $\sqrt{2}$

16. $3\sqrt{75}$ $15\sqrt{3}$

Cumulative Review, Chapters 7-8 Part 2

In Exercises 17-19 $\overline{MN} \parallel \overline{AB}$.

17. If $CM = 4$, $MA = 8$, and $CN = 10$, then $NB = \underline{20}$.
 18. If $CN = 5$, $CM = 4$, and $BN = 7$, then $AC = \underline{9.6}$.
 19. If $AC = 10$, $BC = 12$, and $NB = 8$, then $MA = \underline{6\frac{2}{3}}$.

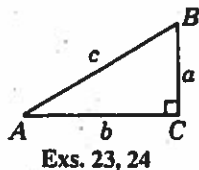


Find the geometric mean between the two numbers.

20. 4 and 16 8 21. 2 and 50 10 22. 5 and 32 $4\sqrt{10}$

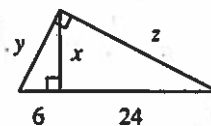
In Exercises 23 and 24 ABC is a right triangle.

23. If $a = 9$ and $b = 12$, then $c = \underline{15}$.
 24. If $a = 8$ and $c = 17$, then $b = \underline{15}$.



The diagram shows a right triangle with the altitude drawn to the hypotenuse.

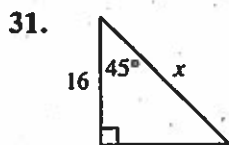
25. $x = \underline{12}$ 26. $y = \underline{6\sqrt{5}}$ 27. $z = \underline{12\sqrt{5}}$



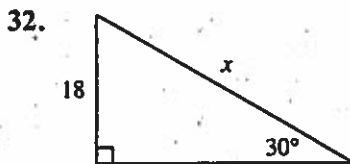
Tell whether a triangle with sides of the given lengths is acute, right, or obtuse.

28. 12, 16, 20 right 29. 4, $4\sqrt{2}$, 6 acute 30. 7, 8, 12 obtuse

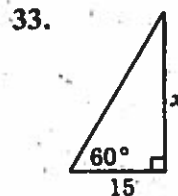
Find the value of x .



$x = \underline{16\sqrt{2}}$

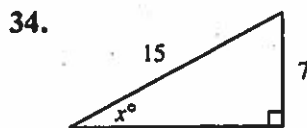


$x = \underline{36}$

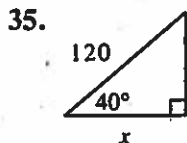


$x = \underline{15\sqrt{3}}$

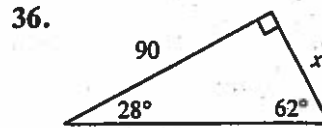
Find the value of x correct to the nearest integer. Use a scientific calculator or the table on page 311 of the text.



$x \approx \underline{28}$



$x \approx \underline{92}$



$x \approx \underline{48}$