

Name _____ Date _____

Chapter 8 Review - Part 1

8.1 – Simplifying Square Roots

Simplify the following:

1) $\sqrt{28}$

2) $6\sqrt{125}$

3) $-3\sqrt{72} + 6\sqrt{52} - 7\sqrt{128}$

4) $(3\sqrt{5})^2$

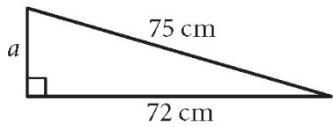
5) $\frac{3}{\sqrt{3}}$

6) $\frac{1}{5\sqrt{2}}$

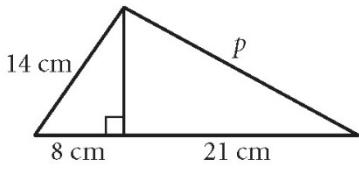
8.2 & 8.3 – The Pythagorean Theorem and Its Converse

Find the missing side. Round to the nearest tenth place.

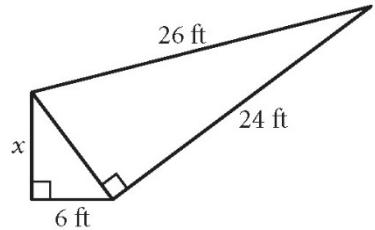
7) $a = \underline{\hspace{2cm}}$



8) $p = \underline{\hspace{2cm}}$



9) $x = \underline{\hspace{2cm}}$



- 10) Find the height of an equilateral triangular with side length 9 cm.

- 11) List the Pythagorean triples (Primitives):

Determine whether or not a triangle with the given side lengths is a right triangle.

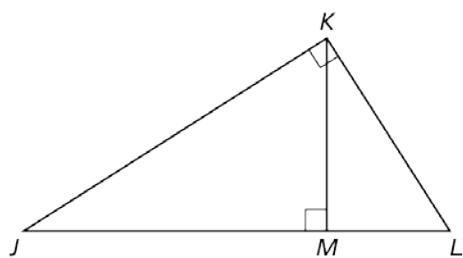
12) 76, 120, 98

13) 221, 204, 85

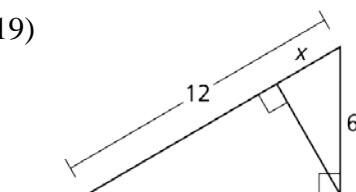
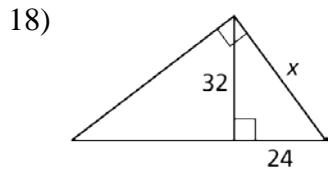
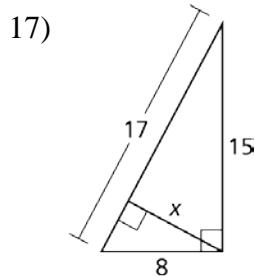
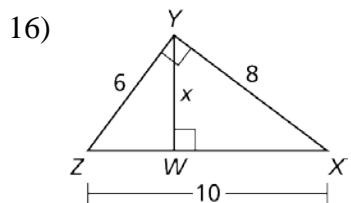
14) $\sqrt{14}$, $\sqrt{30}$, 4

8.4 – Using Similar Right Triangles

15) Write a similarity statement for the three similar triangles:

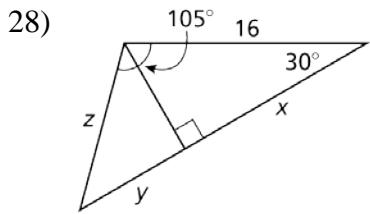
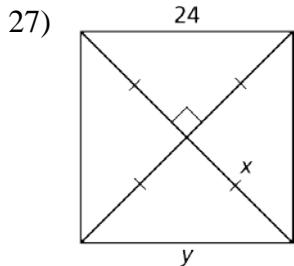
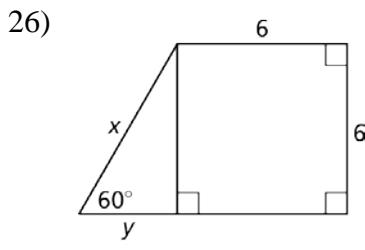
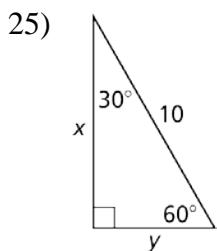
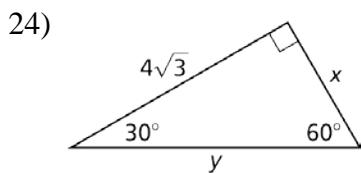
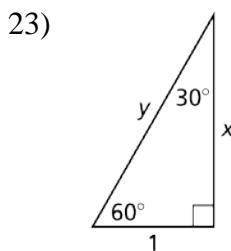
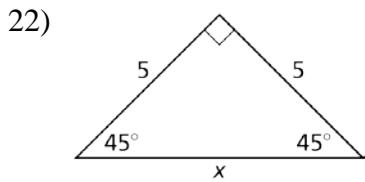
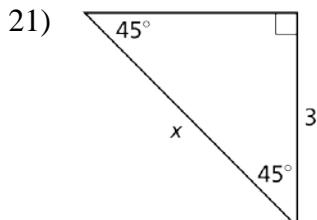
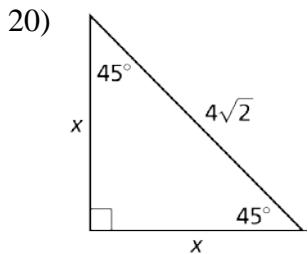


Find the value of x .



8.5 – Special Right Triangles

Find the value of the variables. Write your answers in simplest radical form.



8.6 – The Distance Formula

29) What is the distance formula? Distance = _____

Find the distance between the points.

30) (5, 6) and (1, 3)

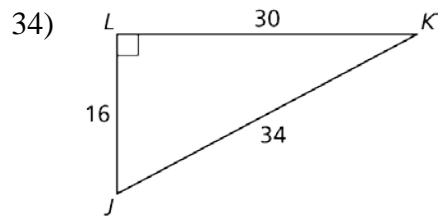
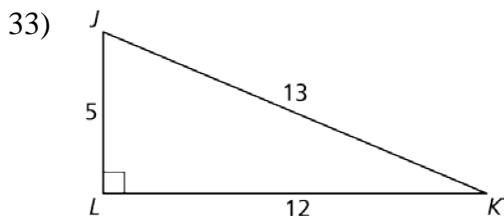
31) (3, 5) and (4, -1)

32) Determine whether a triangle with the following vertices is scalene, isosceles, or equilateral.

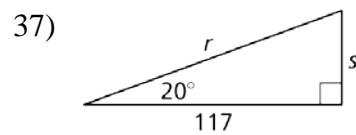
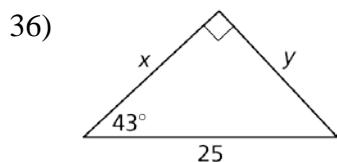
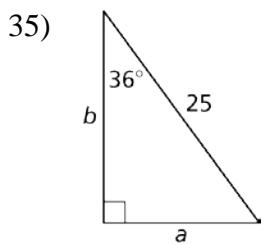
(3, 2) (-10, 4), (-5, -8)

8.7/8.8 – Using Trigonometric Functions

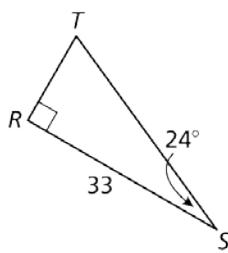
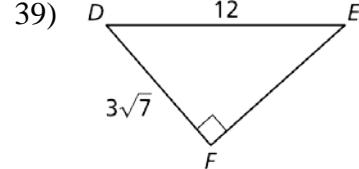
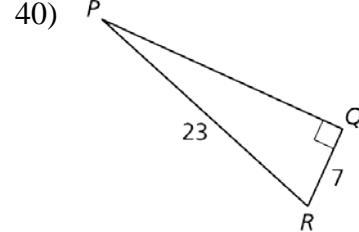
Find $\sin J$, $\sin K$, $\cos J$, and $\cos K$. Write each answer as a fraction and as a decimal rounded to four places.



Find the value of the missing sides. Round to the nearest tenth.



Find the value of all the sides and angles.

- 38)  A right triangle with vertices labeled R, T, and S. Vertex R is at the bottom-left, vertex T is at the top, and vertex S is at the bottom-right. A right angle symbol is at vertex R. A 24° angle symbol is at vertex S. The side RS is labeled 33.
- 39)  A right triangle with vertices labeled D, E, and F. Vertex D is at the top-left, vertex E is at the top-right, and vertex F is at the bottom. A right angle symbol is at vertex F. The hypotenuse DE is labeled 12. The leg DF is labeled $3\sqrt{7}$.
- 40)  A right triangle with vertices labeled P, Q, and R. Vertex P is at the top-left, vertex Q is at the top-right, and vertex R is at the bottom. A right angle symbol is at vertex R. The hypotenuse PQ is labeled 23. The leg QR is labeled 7.