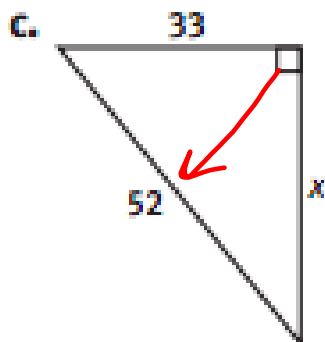


Warm up: Geometry

1/17

Solve for x.



$$a^2 + b^2 = c^2$$

legs

$$33^2 + b^2 = 52^2$$

$$1089 + b^2 = 2704$$

$$\begin{array}{r} -1,089 \\ \hline \sqrt{b^2} = \sqrt{1,615} \end{array}$$

$$x, b = 40.2$$

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P.W. Solutions: pg. 289 #'s 1-6

- | | |
|---------------|----------------------|
| 1. a. 61 ft | 3. 3744 square units |
| b. 113 mm | 4. 28 in. |
| c. 3281 cm | 5. C |
| d. 101 in. | 6. B |
| e. 785 ft | |
| 2. a. $x = 5$ | |
| b. $y = 203$ | |
| c. $x = 1615$ | |

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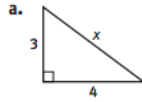
P.W. Solutions:

pg. 289 #'s1-6

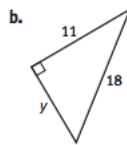
1. Find the length of the hypotenuse of each right triangle with the given leg lengths. Express the answer as a simplified radical.

- a. legs: 11 ft and 60 ft
- b. legs: 7 mm and 8 mm
- c. legs: 40 cm and 41 cm
- d. legs: 20 in. and 99 in.
- e. legs: 16 ft and 23 ft

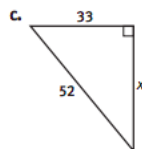
2. Find each unknown length. Express the length in radical form.



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

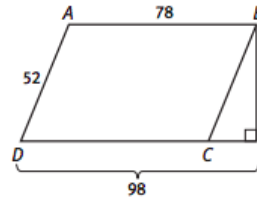


$y = \underline{\hspace{2cm}}$



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

3. Find the area of parallelogram $ABCD$.



4. If a flat-screen television is a rectangle with a 53-inch diagonal and a width of 45 inches, what is the height of the screen?

5. A standard baseball diamond is a square 90 feet on each side. Find the distance of a throw made from the catcher 3 feet behind home plate in an attempt to throw out a runner trying to steal second base. Round to the nearest whole number.

- A. 93 ft
- B. 124 ft
- C. 130 ft
- D. 183 ft

6. Which best approximates the lengths of the legs of a right triangle if the hypotenuse is 125 mm and the shorter leg is one-half the length of the longer leg?

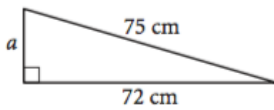
- A. 25 mm and 55 mm
- B. 56 mm and 112 mm
- C. 5 mm and 10 mm
- D. 63 mm and 63 mm

Jan 16-9:26 PM

P.W. Solutions:

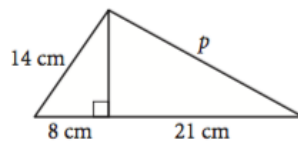
Give all answers rounded to the nearest 0.1 unit.

1. $a = \underline{\hspace{2cm}}$



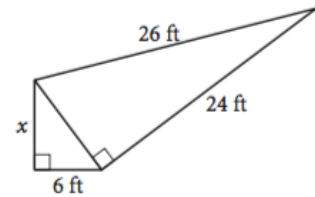
$a = 21\text{cm}$

2. $p \approx \underline{\hspace{2cm}}$



$p = 23.9\text{cm}$

3. $x = \underline{\hspace{2cm}}$



$x = 8\text{ft}$

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W.A.L.T.:

Simplify radicals and identify perfect squares.
Continue understanding of theorem.

W.A.S.I.:

We can use factoring to solve radical problems and identify perfect squares.

Solve right triangle problems using the theorem.

Jan 16-11:16 AM

Notes: Radicals

$\sqrt{4}$

This is a radical.

We use a radical to take the square root of a number.

Taking the square root of a number undoes squaring a number.

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Notes: Simplifying Radicals & Perfect Squares

$\sqrt{\quad}$ Perfect square = whole number

$\sqrt{4} = 2$	<p>a=b(h)</p>	$2^2 = 4$
$\sqrt{9} = 3$		$2 \cdot 2 = 4$
$\sqrt{16} = 4$		$3^2 = 9$
$\sqrt{25} = 5$		$4^2 = 16$
$\sqrt{81} = 9$		$5^2 = 25$
		$9^2 = 81$

Perf. Squares

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Notes: Simplifying Radicals & Perfect Squares

$\sqrt{\quad}$ Not a perfect square = factor and simplify

$\sqrt{12} \rightarrow 12$

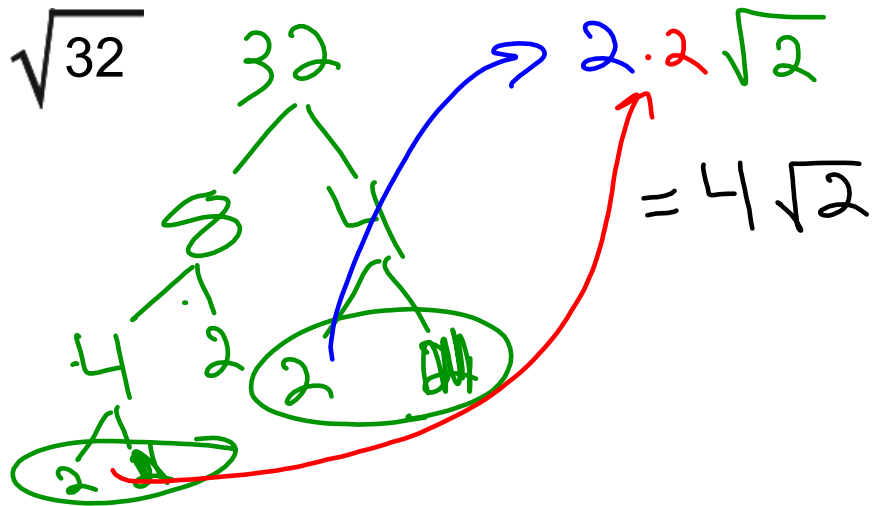
$\sqrt{12} = \sqrt{4} \cdot \sqrt{3} = 2\sqrt{3}$

Perfect square, can stop here

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In-class work:

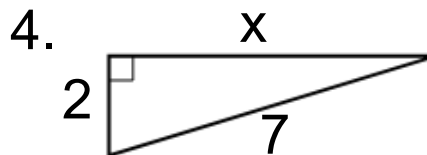
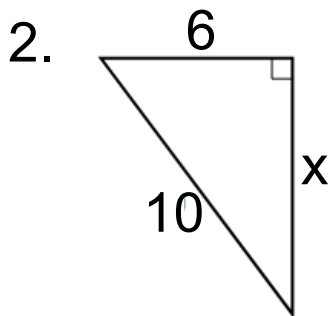
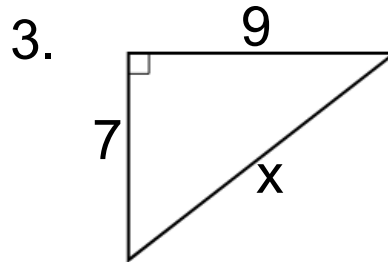
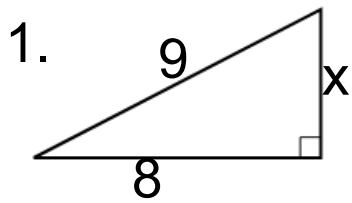
Simplify $\sqrt{32}$



Jan 17-1:18 PM

In-Class Work:

Solve for x.



Jan 16-11:19 AM

In-Class Work:

Simplify (no decimals, factor!).

$$5. \sqrt{345} = \underline{\hspace{2cm}} \quad 7. \sqrt{90} = \underline{\hspace{2cm}}$$

$$6. \sqrt{44} = \underline{\hspace{2cm}} \quad 8. \sqrt{18} = \underline{\hspace{2cm}}$$

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P.W.:

Whatever in-class work you didn't finish is P.W. and will be collected Tuesday!

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