

## 3C Review: Get Ready for Trig

**Part A: Solving Equations**

Solve:

$$\begin{aligned} \text{a) } x^2 &= 3^2 + 4^2 \\ x^2 &= 9 + 16 \\ x^2 &= 25 \\ x &= \pm\sqrt{25} \\ &= \pm 5 \end{aligned}$$

$$\begin{aligned} \text{b) } 5^2 + x^2 &= 17^2 \\ x^2 &= 17^2 - 5^2 \\ x^2 &= 289 - 25 \\ x^2 &= 264 \\ x &= \pm\sqrt{264} \\ &\approx \pm 16.2 \end{aligned}$$

**Part B: Rounding**

Round to two decimal places.

$$\begin{aligned} \text{a) } 5.6781 \\ &\approx 5.68 \end{aligned}$$

$$\begin{aligned} \text{b) } 3.2847 \\ &\approx 3.28 \end{aligned}$$

$$\begin{aligned} \text{c) } 7.4986 \\ &\approx 7.50 \end{aligned}$$

$$\begin{aligned} \text{d) } \sqrt{524} \\ &\approx 22.8910 \\ &\approx 22.89 \end{aligned}$$

Square using Calculator

ex.  $5^2$

$5$   $x^2$

OR

$5$   $y^x$   $2$

OR

$5$   $\times$   $5$

Square Root Using Calculator

ex.  $\sqrt{25}$

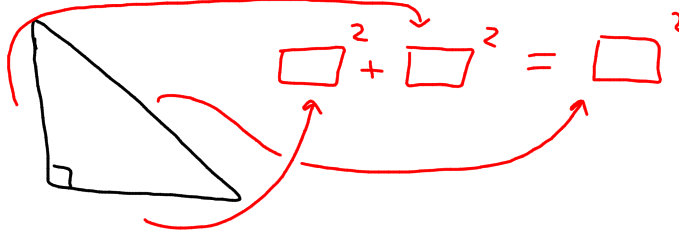
$25$   $\sqrt{x}$

OR

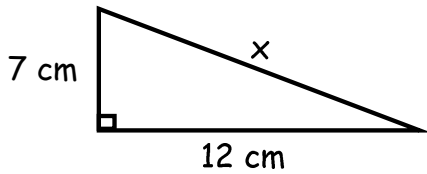
$25$   $\sqrt{\quad}$

**Part C The Pythagorean Theorem**

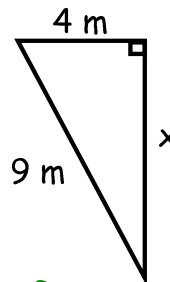
RIGHT ANGLE  $\Delta$ 'S ONLY



Find the value of  $x$ . Round to 2 decimal places.



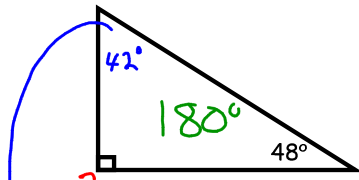
$$\begin{aligned} x^2 &= 7^2 + 12^2 \\ x^2 &= 49 + 144 \\ x &\doteq 13.8924 \\ &\doteq 13.89 \end{aligned}$$



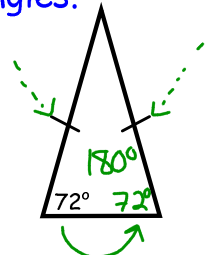
$$\begin{aligned} 9^2 &= 4^2 + x^2 \\ 81 &= 16 + x^2 \\ 81 - 16 &= x^2 \\ 65 &= x^2 \\ 8.06 &\doteq x \end{aligned}$$

**Part D Angles in a Triangle**

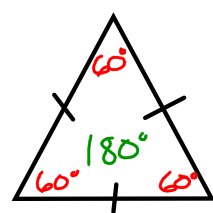
Find the measure of all the angles.



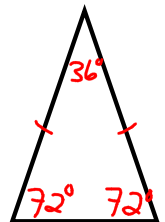
$$\begin{aligned} 90^\circ & \text{ (right angle)} \\ 180^\circ - 90^\circ - 48^\circ & = 42^\circ \end{aligned}$$



$$180^\circ - 72^\circ - 72^\circ = 36^\circ$$




All angles the same  
 $\therefore \frac{180^\circ}{3} = 60^\circ$



**Part E Ratios and Proportions**

1. Write each ratio in lowest terms.

just like putting a fraction in lowest terms  
find a # that divides evenly into  
each part of the ratio 

$$\begin{aligned} &15:35 \\ \div 5 & \\ = &3:7 \end{aligned}$$

$$\begin{aligned} &3:12 \\ \div 3 & \\ = &1:4 \end{aligned}$$

$$\frac{6}{14} = \frac{3}{7}$$

2. Solve for x.

$$\begin{aligned} \text{a) } &\frac{x}{7} = \frac{15}{21} \\ &\swarrow \div 3 \quad \nwarrow \\ &\swarrow \div 3 \quad \nwarrow \end{aligned}$$

$$\begin{aligned} \text{b) } &\frac{2}{5} = \frac{3}{x} \\ &\nearrow \times 1.5 \quad \searrow \\ &\searrow \times 1.5 \quad \nearrow \end{aligned} \quad x = 7.5$$

$$\begin{aligned} \text{c) } &\frac{12}{1} = \frac{36}{x} \\ &\nearrow \times 3 \quad \searrow \\ &\searrow \times 3 \quad \nearrow \end{aligned}$$

$$\text{d) } \frac{x}{12} = \frac{y}{24} = \frac{6}{9}$$

$$x = 3$$

$$\begin{aligned} &\frac{x}{12} = \frac{6}{9} \\ &\nearrow \times 1.333 \quad \searrow \\ &\searrow \times 1.333 \quad \nearrow \end{aligned} \quad x = 8$$

$$\frac{8}{12} = \frac{y}{24} = \frac{6}{9}$$

$$\begin{aligned} &\frac{8}{12} = \frac{y}{24} \\ &\nearrow \times 2 \quad \searrow \\ &\searrow \times 2 \quad \nearrow \end{aligned} \quad y = 16$$

**Homework**  
**page 4-5**  
**#1- 4, 6, 8-10**

