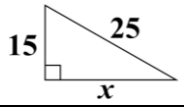
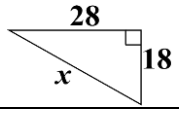
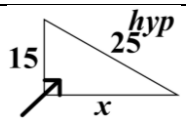
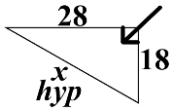
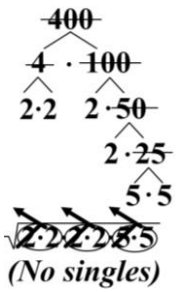
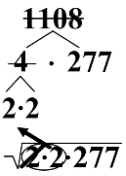
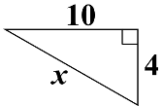
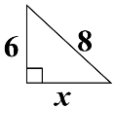
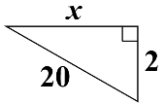
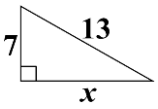
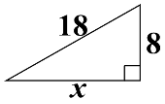
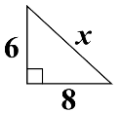
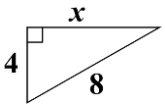
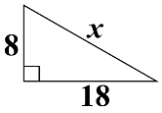
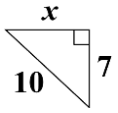
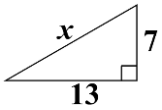
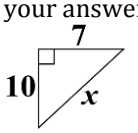
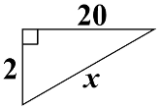
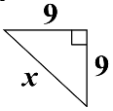
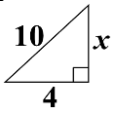
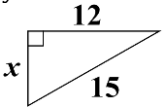
Name: _____ Per: ____

Unit 5 Review – Pythagorean Theorem

	EXAMPLE – Determine the value of *x*. Write your answer as a simplified radical. 	**EXAMPLE –** Determine the value of *x*. Write your answer as a simplified radical. 
Step 1: Know your formula.	$a^2 + b^2 = c^2$	$a^2 + b^2 = c^2$
Step 2: Identify the hypotenuse (side across from 90°). The number or x on that side is c. $a^2 + b^2 = hyp^2$	 $a^2 + b^2 = (25)^2$	 $a^2 + b^2 = x^2$
Step 3: Plug the other two sides in for a & b (it doesn't matter which is which).	$x^2 + (15)^2 = (25)^2$	$(18)^2 + (28)^2 = x^2$
Step 4: Simplify the squares.	$x^2 + 225 = 625$	$324 + 784 = x^2$
Step 5: If the numbers are on the same side of the equal sign, add them up. If the numbers are on different sides, subtract the number away from x^2.	$-225 \quad -225$ $x^2 = 400$	$1108 = x^2$
Step 6: Square root and simplify by creating a factor tree. Remember, singles don't get to go out (of the $\sqrt{\ }$), but one member of a couple will sacrifice itself for the other to get free.	$x = \sqrt{400}$  $x = 2 \cdot 2 \cdot 5$	$x = \sqrt{1108}$  $x = \boxed{2\sqrt{277}}$
Step 7: If needed, multiply the numbers that are in front of the $\sqrt{\ }$ and multiply the numbers that are inside the $\sqrt{\ }$.	$x = \boxed{20}$	

1. Determine the value of *x*. Write your answer as a simplified radical. 	2. Determine the value of *x*. Write your answer as a simplified radical. 	3. Determine the value of *x*. Write your answer as a simplified radical. 

Name: _____ Per: ____

4. Determine the value of *x*. Write your answer as a simplified radical. 	5. Determine the value of *x*. Write your answer as a simplified radical. 	6. Determine the value of *x*. Write your answer as a simplified radical. 
7. Determine the value of *x*. Write your answer as a simplified radical. 	8. Determine the value of *x*. Write your answer as a simplified radical. 	9. Determine the value of *x*. Write your answer as a simplified radical. 
10. Determine the value of *x*. Write your answer as a simplified radical. 	11. Determine the value of *x*. Write your answer as a simplified radical. 	12. Determine the value of *x*. Write your answer as a simplified radical. 
13. Determine the value of *x*. Write your answer as a simplified radical. 	14. Determine the value of *x*. Write your answer as a simplified radical. 	15. Determine the value of *x*. Write your answer as a simplified radical. 

Unit 5 Review – Special Triangles

1. $x = 2\sqrt{29}$	2. $x = 2\sqrt{7}$	3. $x = 6\sqrt{11}$	4. $x = 2\sqrt{30}$	5. $x = 2\sqrt{65}$
6. $x = 10$	7. $x = 4\sqrt{3}$	8. $x = 2\sqrt{97}$	9. $x = \sqrt{51}$	10. $x = 4\sqrt{13}$
11. $x = \sqrt{149}$	12. $x = 2\sqrt{101}$	13. $x = 9\sqrt{2}$	14. $x = 2\sqrt{21}$	15. $x = 9$