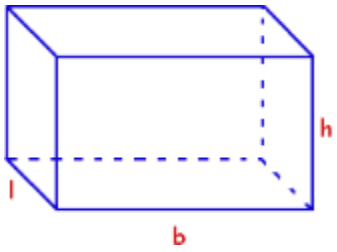
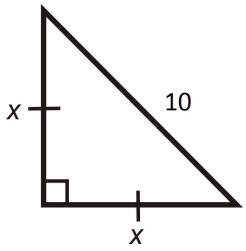
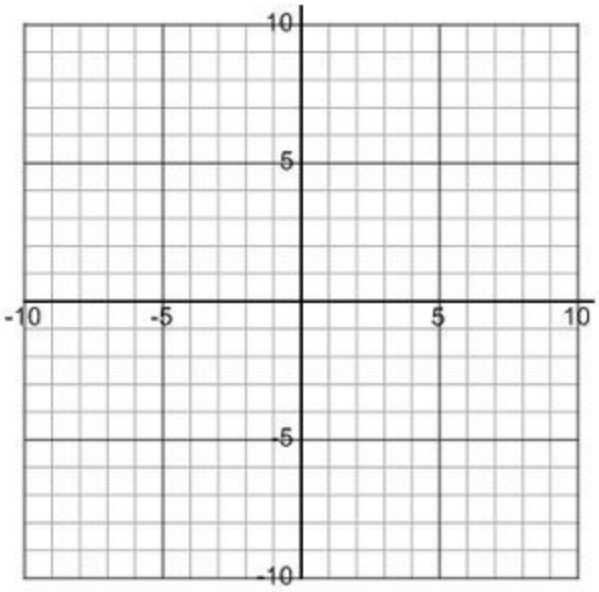
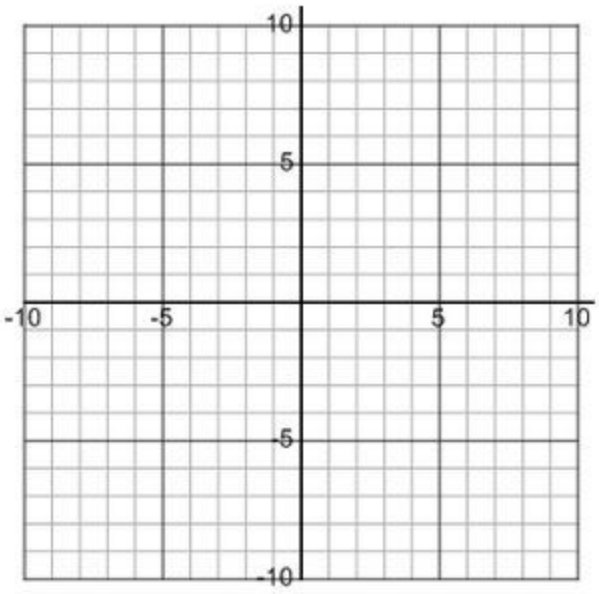
1C Operations with Radicals Score _____/15	Name
1. Simplify: $\frac{6+\sqrt{12}}{4}$	2. Simplify: $\sqrt[5]{32a^{15}}$
3. Simplify: $\sqrt{40}+2\sqrt{5}$	4. Simplify: $(5\sqrt{3})(2\sqrt{2}) + \sqrt{6}$
5. Find the Surface Area and Volume if the height is 5cm, the length is $\sqrt{3}$ cm, and the width is $4\sqrt{3}cm$. 	6. Find the exact value of x and then find the exact area and perimeter of the following isosceles triangle.. 
7. Graph and label the following if $f(x) = \sqrt{x}$. a. 3f(x) b. 5 - f(x) c. f(2x) d. f(-x) e. f(x+3)	

8. Graph and label the following if $f(x) = \sqrt[3]{x}$
   f. f(-x) - 5
   g. f(2x)
   h. -4f(x)
   i. f(x-2)



9. Simplify and then write the following in RADICAL FORM: $(625x^2)^{1/4}$

10. Find the exact zeros of the quadratic using the quadratic Formula. Make sure you reduce.
$f(x) = x^2 - 2x - 1$

11. Factor the following:
   a. $x^2 - 81$

b. $x^2 - 25$

C. $x^2 - 1$

12. Solve for a:
$C = (25a^4b^8)^{1/2}$

13. Factor:
$2x^2 + 5x - 12$

14.

An equation is shown.

$$-(56y^3x^4)^0 + 3x + 4 = x + y$$

Solve for y.

(A) $y = -56x^4y^3 + 2x + 4$

(B) $y = 2x + 3$

(C) $y = 2x + 4$

(D) $y = 2x + 5$

15. Factor out the common factor.

a. $6x^2 + 12x$

b. $10x^3 - 5x^2 + 15x$

c. $7x - 21x^2$