

1. Write the steps to factoring:

1) _____

2) _____



2. Factor each:

a. $a^2 + 18a - 40$

b. $-3b^2 + 11b - 6$

c. $3x^2 - 3$

d. $14d^2 - 9d - 1$

e. $e^3 + 3e^2 - 8e - 24$

f. $f^2 + 17f - 38$

g. The formula to find the surface area of a cylinder is $2\pi r^2 + 2\pi rh$. Factor the formula.

4. You know (4) methods of solving high degree equations. Solve these (4) problems. You must use each of the methods once. Indicate the method you chose to use on each equation.

a. method:

b. method:

c. method:

d. method:

$w^2 + 30w = 1$

$x^4 - 29x^2 + 100 = 0$

$-3y^2 = 1 - 5y$

$4z^2 = 9z - 5$

5. Solve these equations anyway you please.

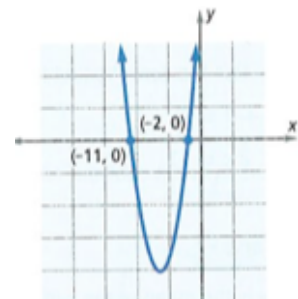
a. $x^2 = 9x$

b. $x^2 - 4x = -1$

c. $-3x^2 + 4x = 4$

d. $x^2 + 2x = 0$

6. A function is graphed at right. Give a possible equation for the function.



7. A bald eagle snatches a fish from a lake and flies to an altitude of 256 ft. before the fish manages to squirm free and fall back to the lake. If the height h , in feet is modeled by $h(t) = -16t^2 + 256$, where t is time in seconds, then how many seconds will the fish be falling before it hits the water?