

Topics:

- Factoring Completely (GCF, difference of perfect squares, trinomials)
  - Solving Quadratic Equations
  - Solving Quadratic Inequalities
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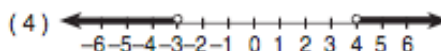
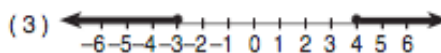
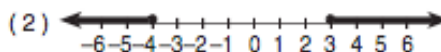
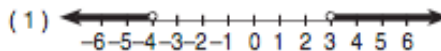
**Practice Problems:**

In 1 – 10, factor completely.

1.  $x^2 + 3x$
2.  $x^2 + 3x - 54$
3.  $2x^2 - 9x + 10$
4.  $y^2 - 100$
5.  $2x^2 + x - 6$
6.  $8y^4 - 8$
7.  $25x^2y^6 - z^{50}$
8.  $10x^2 - 38x - 8$
9.  $4x^2 - 100$
10.  $3x^3y + 15x^2y - 42xy$

In 11 – 17, state the solution set.

11.  $14x^2 - 56 = 0$
12.  $m^2 + 10m = -9$
13.  $d^2 - 2d = 0$
14.  $x^2 - 5x + 4 = 0$
15.  $x(x - 2) = 35$
16.  $4x^2 = 2x^2 + 50$
17.  $x^2 + 22 = 13x$

18. Which graph represents the solution set for  $x^2 + x > 12$ ?19. Solve and graph the solution set on a number line:  $2x^2 > 11x - 14$ .