

You must show all work! 10 points each Simplify when possible!!

Solve by factoring

1. $x^2 + x - 12 = 0$

1. _____

Solve using the quadratic formula.

2. $3x^2 - 2x - 5 = 0$

2. _____

Factor Completely:

3. $27x^3 - 8$

3. _____

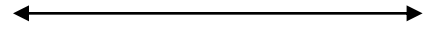
4. $(x^2 - 2)(x^2 + 5x - 2)$

4. _____

Solve and graph:

5. $|2x-1| < 5$

5. _____



6. $|2x-7| = 5$

6. _____



7. Find the **equation** of the line passing through the points.
(3, -2) and (5, 3) Write in standard form. $ax + by = c$

7. _____

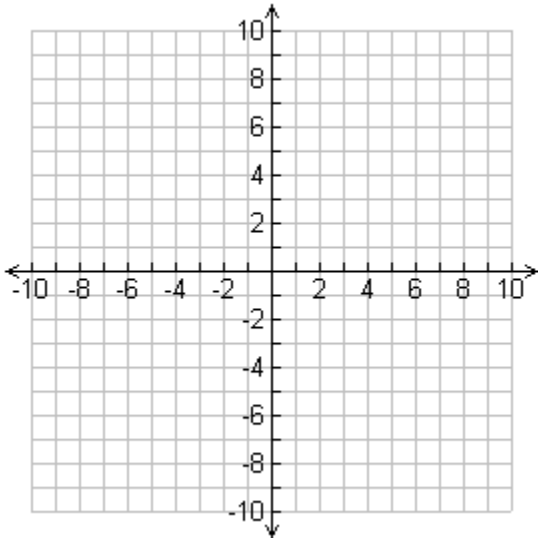
8. Find the **midpoint** and **distance** between the points.
(3, -2) and (5, 3)

8. _____

9. **Graph** the following: Indicate the ***x* and *y* intercepts** (if possible, **axis of symmetry**, and **vertex**.
Hint: Use five points on all graphs. Create extra points if no *x*-intercepts.

$$g(x) = (x-1)^2 - 4$$

Show work here....



10. **Graph** the following: Indicate the ***x* and *y* intercepts** (if possible, **axis of symmetry**, and **vertex**.
Hint: Use five points on all graphs. Create extra points if no *x*-intercepts.

$$g(x) = -x^2 + 9$$

Show work here....

