Trigonometry	Name:
Study Guide 1	Class:
Due Date:	Score:

No Work ⇔ No Points

Use Pencil Only ⇔ Be Neat & Organized

1. **(2 points) Evaluate** $\sqrt{b^2 - 4ac}$ **for** $a = 5$**,** $b = 2$**, and** $c = -3$**.**

1. _____

2. **(3 points) Draw triangle** ABC **given** $A(-3, -2), B(3, 6)$ **and** $C(3, -2)$**. Find the length of the side** AB**.**
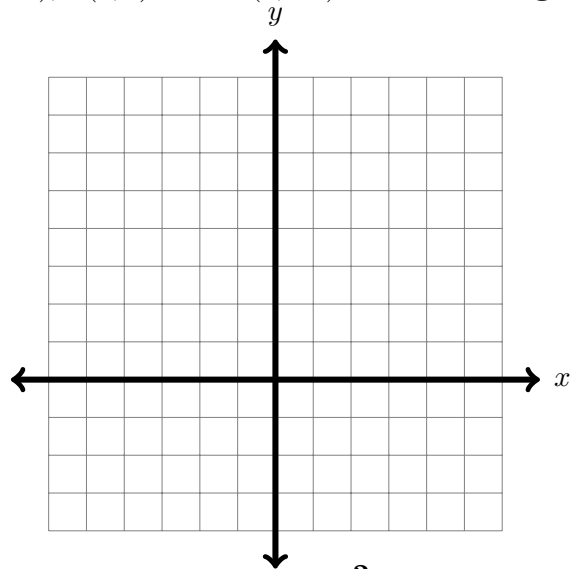
2. _____

3. **(2 points) Solve:** $2(x - 3) - 4 = -10$

3. _____

4. **Simplify:**

   (a) **(2 points)** $(2x - 3)(2x + 3)$

   (a) _____

   (b) **(2 points)** $(x + 5)^2$

   (b) _____

   (c) **(2 points)** $(-4x^2)^3$

   (c) _____

   (d) **(2 points)** $(1 - 2x^2)(1 + 2x^2)$

   (d) _____
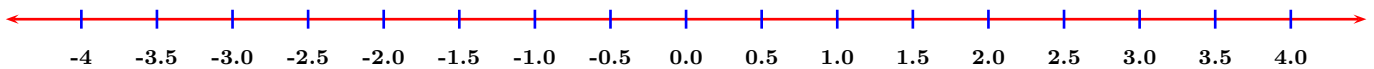
   (e) **(2 points)** $(1 - 3x)^2$

   (e) _____

   (f) **(2 points)** $\left(\dfrac{-5x}{y^3}\right)^2$

   (f) _____

5. **(3 points)** **Graph the solution, and express your final answer in interval notation:**
   $2x - 7 \leq 5x + 2$

-4	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0

   5. _____

6. Factor completely:

    (a) **(2 points)** $4x - 16$

                                                         (a) ________

    (b) **(2 points)** $x^2 + 25$

        (b) ________

    (c) **(2 points)** $x^2 - 10x + 25$

        (c) ________

    (d) **(2 points)** $x^3 - 1000$

        (d) ________

    (e) **(2 points)** $4x^2 + 20x$

        (e) ________

    (f) **(2 points)** $4x^2 - 81$

        (f) ________

7. (3 points) Solve: $x^2 - 4x - 45 = 0$ **by factoring method.**

        7. ________

8. (3 points) Solve: $3x^2 = 2x + 5$ **by factoring method.**

        8. ________

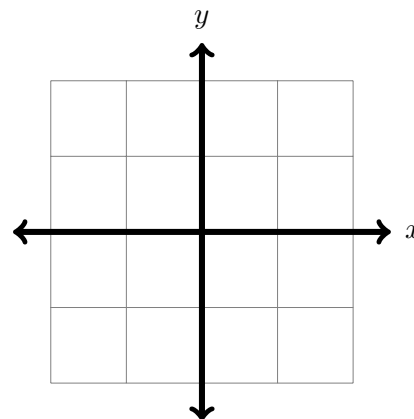**9. (3 points)** Solve: $x^2 - 6x + 9 = 0$ by using the quadratic formula.

9. _____

10. (3 points) Solve: $2x^2 = 3x + 5$ by using the quadratic formula.

10. _____

11. (2 points) Draw $x^2 + y^2 = 1$. Clearly mark all its intercepts.

12. (2 points) Draw $x^2 + y^2 = 4$. Clearly mark all its intercepts.

Study Guide 1 Total Points: 50