

Algebra 2 - Spiral Assignment #1

Name: _____ Pd _____

This assignment is graded based on correct answers.

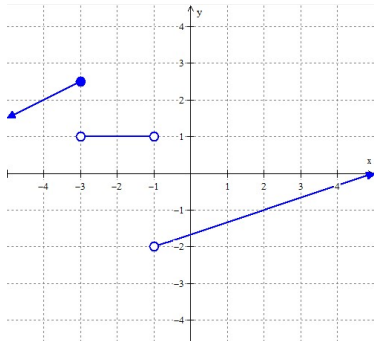
However, there must be work/process shown supporting your answer to receive credit.

DUE: _____

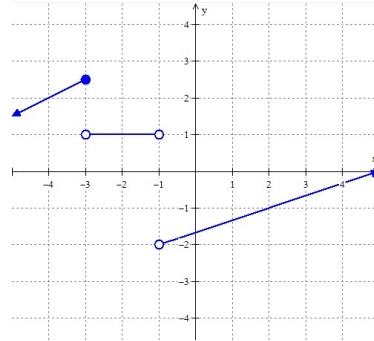
Directions: Print out this worksheet and show ALL of your work in the box for each question. **Highlight** your answers.

NO CALCULATOR

1. Use the given graph to answer each expression.



2. Determine the domain and range of the graph in interval notation.



a) $f(-3)$	b) $f(-2) - f(2)$
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D: _____

R: _____

3. Simplify the following expression.

$$3[(7 - 5)^2 + (20 - 19)^2] + 14$$

4. Let $f(x) = 4x - 9$ and $g(x) = 7x - 3$.

Compute $(f - g)(x)$.

5. Determine if the quadratic has a minimum or maximum and state the value.

$$f(x) = 2x^2 - 4x$$

- A. minimum of 2 B. minimum of -2
 C. maximum of 2 D. maximum of -2

6. Which of the following points **DO NOT** lie on the line $y - 8 = -2(x + 4)$? Select all that apply.

- $(-8, -4)$ $(-8, 4)$ $(8, -4)$ $(8, 4)$
 $(0, -16)$ $(0, 0)$ $(1, -2)$ $(8, 0)$

7. Consider the quadratic function:

$$f(x) = 2(x - 5)^2 + 4$$

Identify the axis of symmetry.

8. According to Google ...

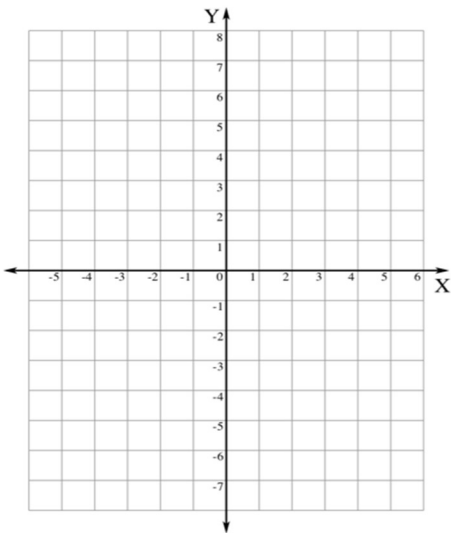
An expression is **completely** factored when no further **factoring** is possible.

With that definition in mind factor the following expression completely.

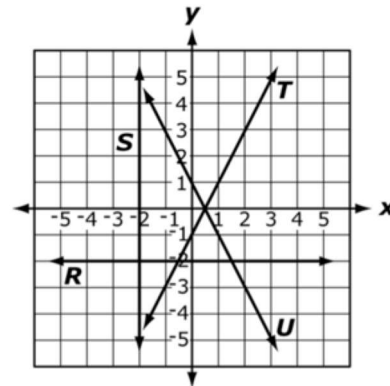
$$16x^4 - 81$$

9. Sketch.

$$y = \begin{cases} -3x + 1, & x < 1 \\ 2x - 2, & x \geq 1 \end{cases}$$



10.



If $f(x) = x - \frac{1}{2}$ and $g(x) = -2$, which graph corresponds to the function $(fg)(x)$?

- A. line R
- B. line S
- C. line T
- D. line U