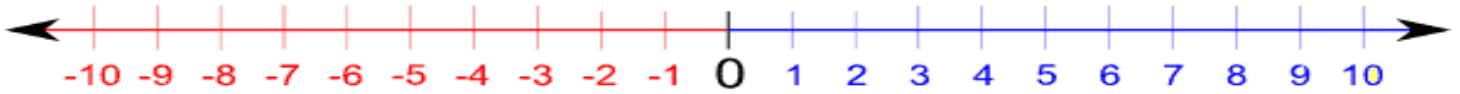




Algebra 1 EOC Review Questions

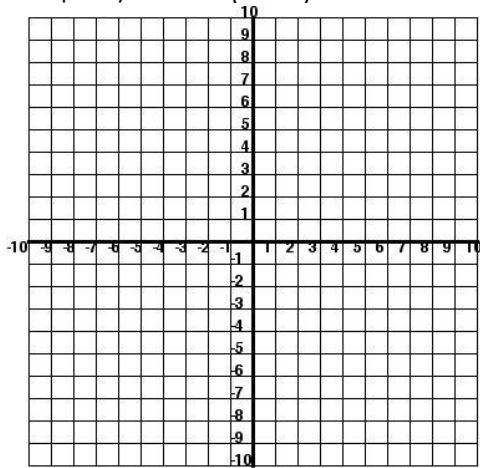
Make sure to show all your work and capture important notes.

Part 1: Non-Calculator Section



1. Express the quadratic function in **factored form**:
 - a. $4x^2 + 17x + 13$
 - b. $3x^2 + 11x + 6$
 - c. $2x^2 + 7x + 3$
2. Rewrite the expression in **radical form**.
 - a. $4m^{1/5}y^{1/4}$
 - b. $3r^{3/4}d^{1/8}$
 - c. $4x^{5/6}p^{1/5}$
3. Solve for v:

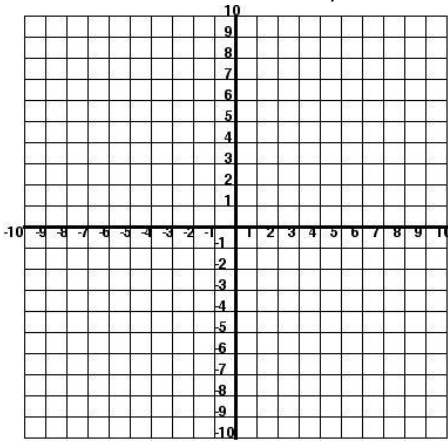
$$d = \frac{Mv}{S}$$
4. Consider the following polynomials: $7(x^2 - 4)$ and $6x^2 + x + 12$
 - a. Find the **sum** of the polynomials.
 - b. Find the **difference** of the polynomials.
5. Graph: $y - 2 = 4(x + 1)$



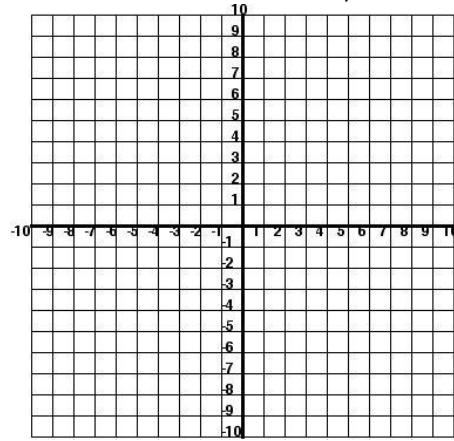
6. Give **one** solution to:
 - a. $2x^2 + 9x = -4$ using factoring
 - b. $3x^2 + 6x = -3$ by using the quadratic formula
7. Solve each of the **proportions**:
 - a. $\frac{x-4}{6} = \frac{x}{3}$
 - b. $\frac{8}{p-4} = \frac{19}{p+6}$
 - c. $\frac{n-9}{8} = \frac{n+2}{2}$
8. Solve for x in terms of the other variables.
 - a. $5x + D = K$
 - b. $J - 4x - 3M = M$
 - c. $6x - B = 3L$

9. Graph:

$$y = 4^x$$



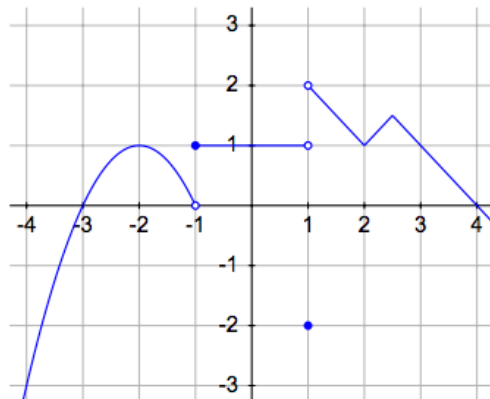
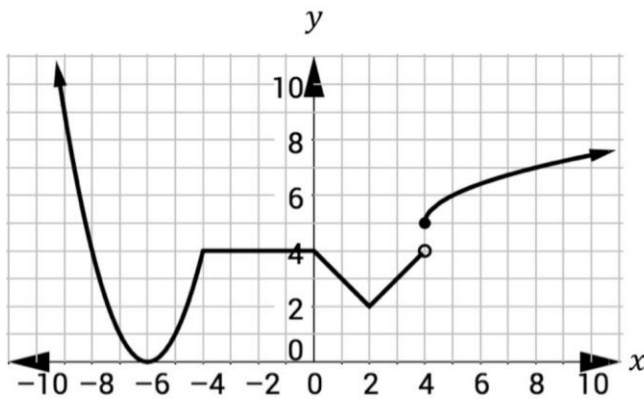
$$y = 3^x$$



10. Consider the equation **exponential function** $y = 4(0.75)^x$
- What does 4 represent?
 - Sketch what this graph would look like.
 - Explain the difference between $y = 4(0.75)^x$ and $y = 4(1.75)^x$
11. Fill in the missing parts of the proof below.

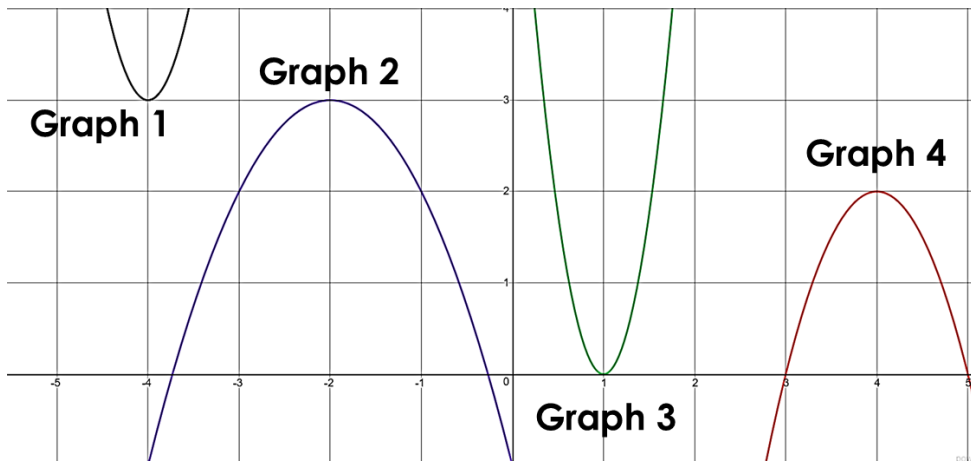
Statements	Reasons
1. $4x - 6 = -9(6x + 7)$	1. Given
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

12. Determine whether each graph below represents a **function**. Explain why or why not.

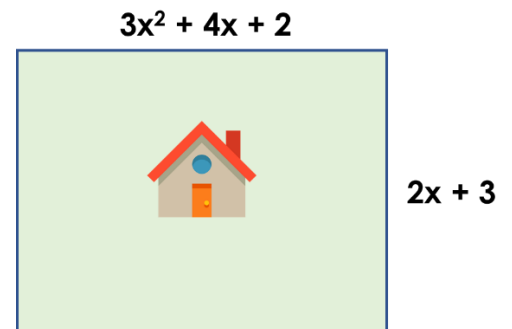


13. Solve: $\frac{1}{4}(8x - 1) = \frac{3}{6}(6x)$

14. Select the graph that corresponds to the equation: $y = -2(x - 4)^2 + 2$



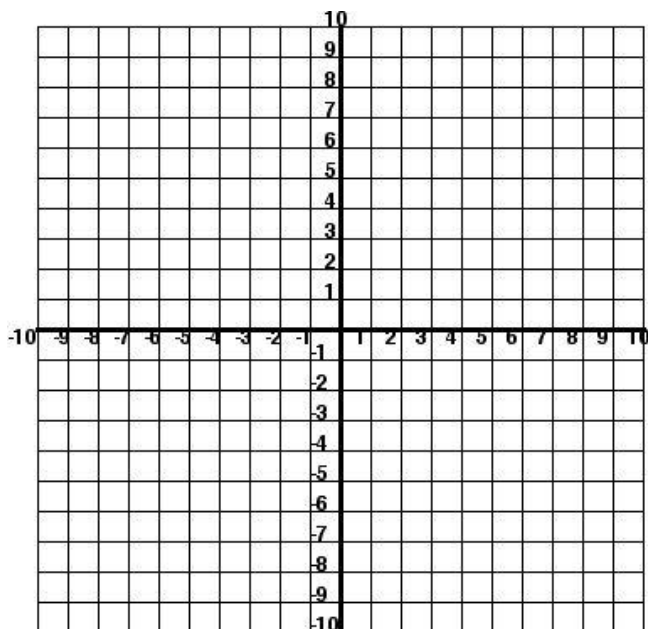
15. Mr. Greene lives in Key West, Florida. The recent winds in the area have destroyed the fence around his rectangular property. The figure below represents Mr. Greene's backyard. Find the polynomial expression that would represent the **perimeter** of the fence.



16. Felicia has worked at a dental office for many years. Her starting salary was \$45,500 and received a yearly pay raise of 5%. Her yearly salary can be **modeled by the function** $s(x) = 45,500(1.05)^x$.

- a. How would Felicia's salary function be different if she had a 7% yearly raise?
- b. How would Felicia's salary function be different if she took a 4% paycut each year?

17. Graph: $y = 3x^2 - 6x + 6$



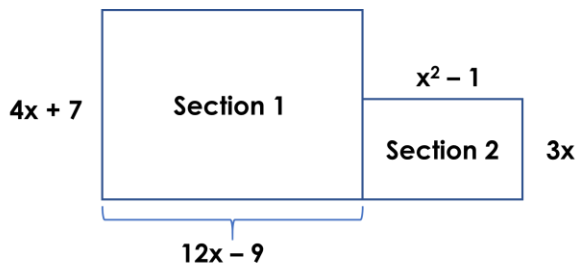
18. Write a **system of equations** that represents the situation below:

Lyft charges a flat fee of \$57.00 and \$0.23 per mile for interstate rides. Uber charges \$47.00 and \$0.35 per mile for interstate rides.

19. Ellen and Eliza went shopping for their moms on Mother's Day. Ellen purchased one pair of shoes and 5 dresses for her mom spending \$103.50. Eliza purchased two pairs of shoes and 3 dresses for her mom totaling \$150.00. Write a **system of equations** that represents this situation.

20. You and a friend go to Taco Bell for lunch. You order two soft tacos and two burritos and your bill totals \$8.25. Your friend's bill is \$15.00 for four soft tacos and three burritos. How much does each taco cost? How much does each burrito cost?

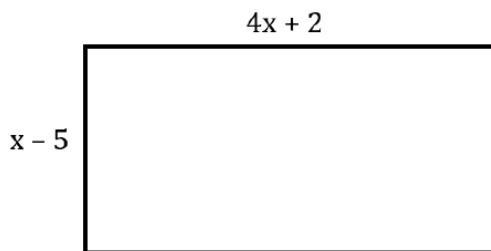
21. The irregular figure below represents a parking lot. Find the total **area** of the parking lot.



22. Multiply (Expand) each polynomial.

- $(3x + 1)(-2x + 6)$
- $(x - 2)(x + 5)$
- $(7x + 6)(x - 4)$

23. Find the area of the rectangle.



24. Which of the following expressions are equivalent to $x^2 + 4x + 3$?

- $(x + 3)(x + 1)$
- $x(x^2 + 4x) + 3$
- $(2x^2 + 5x - 3) - (x^2 + x - 6)$
- $(x + 4)(x + 1)$
- $(x^2 + 5x + 2) + (x - 1)$