

1. Identify the zeros of

$$f(x) = -x^2 - 3x + 4 = -(x+4)(x-1)$$

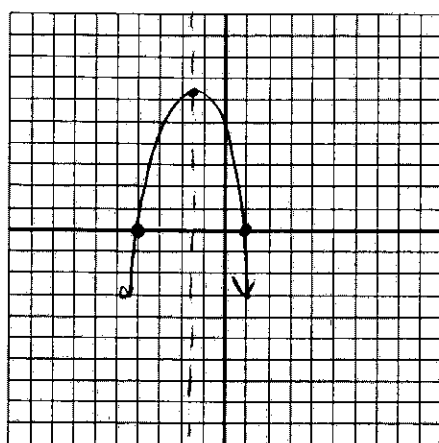
Zeros: -4, 1 or $(-4, 0)$ $(1, 0)$

Graph $f(x)$

$$y = -(-1.5+4)(-1.5-1)$$

$$y = 6.25$$

$$V: (-1.5, 6.25)$$



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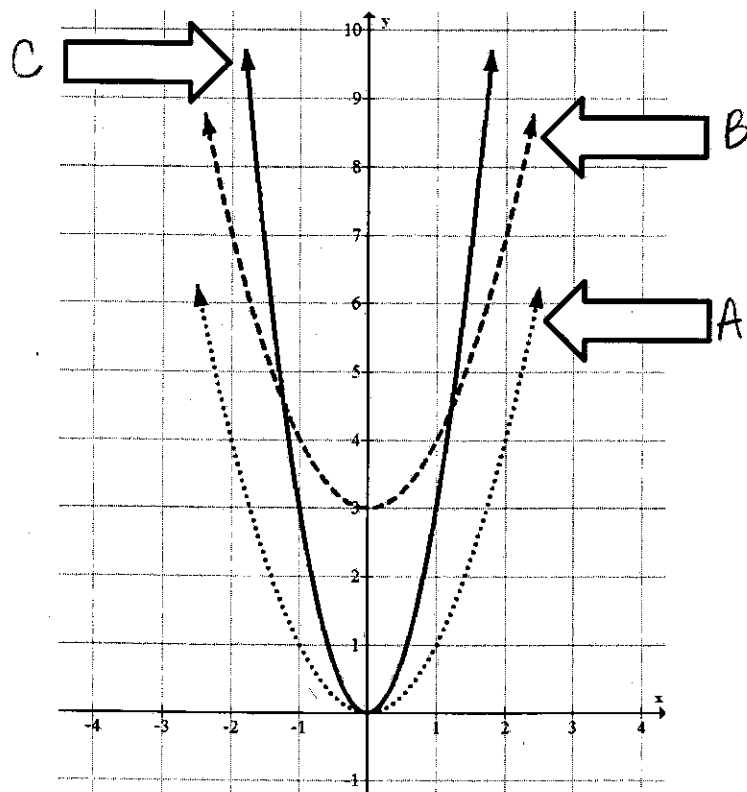
2. These three graphs show the functions:

A) $y = x^2$

B) $y = x^2 + 3$

C) $y = 3x^2$

Label the three graphs with the correct function.



3. Given the following table and information:

x	y
1	5
2	8
2	9
3	7
3	9
4	5
4	8
5	3

*A certain linear function passes through exactly four of the points in the table.

*A certain quadratic function passes through the remaining four points.

Write the linear equation:

$$y - 9 = -2(x - 2) \text{ or } y - 9 = -2x + 4$$

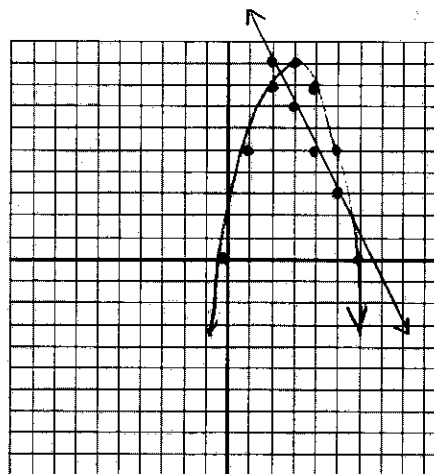
$$y - 9 = -2x + 4$$

$$y = -2x + 13$$

Write the quadratic equation:

$$y = -(x-3)^2 + 9 \text{ or } y = -x(x-6)$$

Graph the line and the parabola.



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4. For all real numbers x ,

$$(3x+2)(2x-5) = ax^2 + kx + n$$

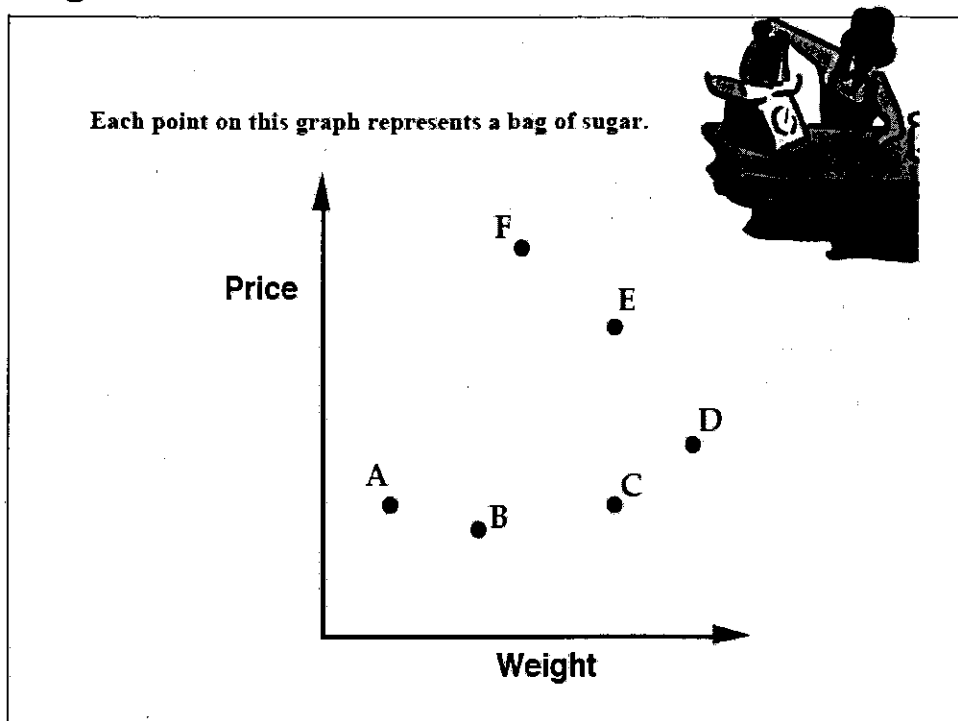
Find the values of a, k, n .

$$6x^2 - 13x - 10$$

$$6x^2 - 11x - 10$$

$$a=6 \quad k=-11 \quad n=-10$$

Sugar Prices



5. Which point shows the heaviest bag? **D**

6. Which point shows the cheapest bag? **B**

7. Which points show bags with the same weight?

E, C

8. Which points show bags with the same price?

A, C

9. Which of For C give the best value for money?

How can you tell? **C** weighs more cost less

10. The graph of $y = 2^x$ lies in which Quadrant(s)?

a) **I, II**

b) I only

c) I, III

d) I, IV

11. The graph of the equation $y = -2$ is a line

(1) **parallel to the x-axis**

(2) parallel to the y-axis

(3) passing through the origin

(4) passing through the point $(-2, 0)$

12. Completely factored, $\frac{3x^2}{7} - \frac{5x}{7} - \frac{2}{7}$ is equivalent to:

$$\frac{1}{7} (3x^2 - 5x - 2)$$

$$\frac{1}{7} (3x + 1)(x - 2)$$

a) $\frac{3}{7}(x - 2)(x - 1)$

b) $\frac{1}{7}(3x - 1)(x + 2)$

(c) $\frac{1}{7}(3x + 1)(x - 2)$

d) $7(3x - 1)(x + 2)$