$\qquad$

1. Identify the zeros of $f(x)=-x^{2}-3 x+4=-(x+4)(x-1)$

Zeros: $\qquad$
Graph $f(x)$


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2. These three graphs show the functions:
A) $y=x^{2}$
B) $y=x^{2}+3$
C) $y=3 x^{2}$

Label the three graphs with the correct function.

3. Given the following table and information:

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| 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:

Write the quadratic equation:

Graph the line and the parabola.


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4. For all real numbers $x$,
$(3 x+2)(2 x-5)=a x^{2}+k x+n$
Find the values of $a, k, n$.

## Sugar Prices


5. Which point shows the heaviest bag?
6. Which point shows the cheapest bag?
7. Which points show bags with the same weight?
8. Which points show bags with the same price?
9. Which of F or C give the best value for money?

How can you tell?
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, $\frac{3 x^{2}}{7}-\frac{5 x}{7}-\frac{2}{7}$ is equivalent to:
a) $\frac{3}{7}(x-2)(x-1)$
b) $\frac{1}{7}(3 x-1)(x+2)$
c) $\frac{1}{7}(3 x+1)(x-2)$
d) $7(3 x-1)(x+2)$

