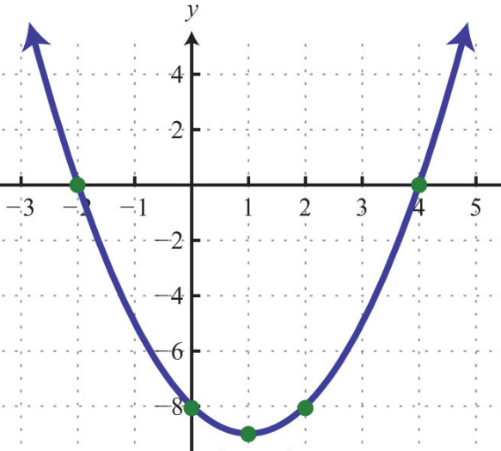
**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ALGEBRA 2 COMMON CORE**

**TEST Review**

Find the average rate of change over the interval [0,4].

Let Find

Find the vertex of the quadratic equation,

Find a quadratic regression for the data below which represents the average rainfall per year for Rochester, NY. Let represent. *(round to the nearest thousandth)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2018 |
| Rainfall | 39” | 37.8” | 34.3” | 30.1” | 28” | 34.4” | 36” | 40.1” |

What type of solutions does the quadratic equation have?

1. real, irrational, unequal
2. real, rational, unequal
3. real, rational, equal
4. imaginary

What is the simplified form of

Solve 3 for , algebraically.

Write the equation of the circle in standard form, then identify the center of the circle and radius.

Write an equation of a parabola with a focus of and a directrix of

1. State the vertex.
2. Write the equation of the parabola.
3. Sketch the parabola.

Solve each of the following by factoring. Show all work.

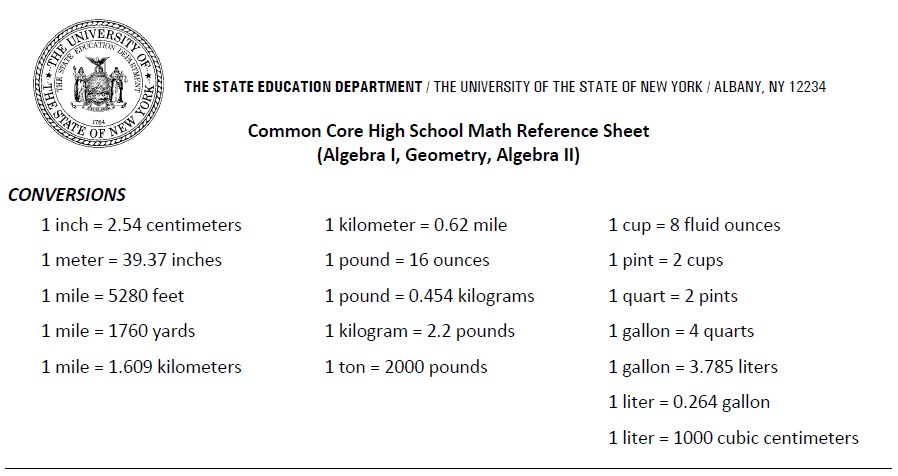
1. b.

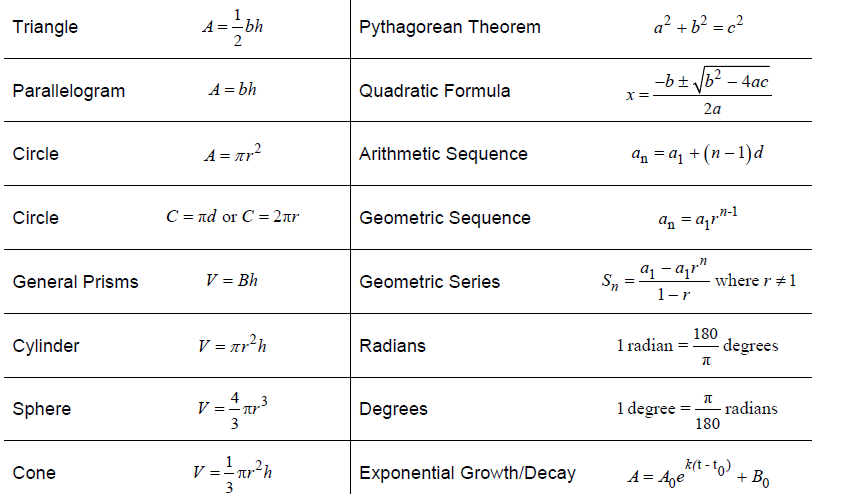
Graph on axes below. Label the solution set **S**.

State the coordinates of ONE point in the solution set **S**: \_\_\_\_\_\_\_\_\_\_

Solve the system of three equations and three unknowns.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | *x* | + | *y* | − | *z* | = | 4 |
|  | | | | | |  |  |
|  | *x* | − | 2*y* | + | 3*z* | = | −6 |
|  | | | | | |  |  |
|  | 2*x* | + | 3*y* | + | *z* | = | 7 |



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