**Honors Math 3 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Unit 2 Review Sheet **Date** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. a) What are solutions of a parabola also commonly called? Name all three terms.

b) Convert the equation to vertex form.c) What is the maximum of the parabola associated with that function? d) What is the axis of symmetry? e) Solve $y=-3x^{2}-12x+2$ by any method. |
| 1. a) Given the graph of the parabola, find the standard form of the function.

b) Convert the equation to vertex form. |
| 1. a) Use the discriminant to find how many and what type of roots $35x=4x^{2}+49$ has.

b) What are the factors of the function?c) Solve the equation. |
| 1. Simplify:
2. $\sqrt{48a^{13}b^{12}}$
3. $5\sqrt{32a^{5}b^{7}c^{10}}$
4. $\frac{-6}{2\sqrt{8}}$
5. $\frac{2}{\sqrt{3}}$
 | 5) Brianna launches a rocket in her science class that follows the path y = -16x2 + 64x + 5.1. Put Brianna’s function into vertex form.
2. What is the maximum height of the rocket?
3. When will her rocket reach its maximum height?
4. When will her rocket hit the ground?
5. What will the height of her rocket be after 1.5 seconds?
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| 6) Solve using the method given.**Factoring**

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| 1. $4x^{2}-64=0$
 | 1. 12x3 + 2x2 - 30x - 5 = 0
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| 1. $x^{3}-125=0$
 | 1. $3x^{4}-11x^{2}+6=0$
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  **Complete the Square** 1. $3x^{2}+20x+36=4$ b) $x^{2}+2x=-20$

 **Quadratic Formula** 1. $8x^{2}+4x-16=-x^{2}$ b) $8x^{2}+6x=-5$

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|  7) Simplify!1. $5\sqrt{-48}$
2. $-3\sqrt{-32}$
3. $\frac{5+3i}{2-4i}$
4. $4i(2-3i)$
5. $\left(8+3i\right)^{2}$
 | 8) Give 3 examples of the following types of numbers.1. Rational and whole
2. Rational, natural, and whole
3. Rational only
4. Rational integer
5. Irrational
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