Algebra 1 Final Review, spring 2014 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Show *all* work to receive full credit. Good luck!**

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| **For numbers 1-2, *simplify* the expressions** | | | | | | | | |
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| **For numbers 3-8, *solve* the equations** | | | | | | | | |
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| **For numbers 9-10, *graph* the linear equations** | | | | | | | | |
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| **For numbers 11-14, *identify* the *slope* and *y-intercept* of the linear equations** | | | | | | | | |
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| **For numbers 15-18, *write* the equation of the line in *slope-intercept* form using the given information** | | | | | | | | |
| 1. Slope:   y-intercept: 2 | | | | 1. Slope: 4   Passes through the point: (-2 , -13) | | | | |
| 1. Passes through the points (-6 , -8) and (3 , -2) | | | | 1. Has the given graph |  | | | |
| **For numbers 19-20, *solve* the inequality, then *graph* the solution range on the number line** | | | | | | | | |
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| **For numbers 21-24, *solve* the *system of linear equations*** | | | | | | | | |
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| 1. ***Graph* the *linear inequality*** | | | | 1. ***Graph* the *system of linear inequalities*** | | | | |
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| **For numbers 27-28, *find the zeroes* of the quadratic function by *factoring*** | | | | | | | | |
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| **For numbers 29-30, *find the zeroes* of the quadratic function by using the *quadratic formula*** | | | | | | | | |
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| **For numbers 31-32, *graph* the quadratic functions** | | | | | | | | |
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| **For numbers 33-36, *simplify* using only positive exponents** | | | | | | | | |
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| **Use the given senario to answer questions 37-40.**  **You have a bag of marbles. There are 5 red, 3 blue, 6 green, and 2 black marbles.** | | | | | | | | |
| 1. What is the probability of choosing a red marble at random from the bag? | | | | 1. What is the probability of choosing a black marble or a green marble at random from the bag? | | | | |
| 1. What is the probability of picking a blue marble, setting it aside, and then picking another blue marble? | | | | 1. What is the probability of picking a white marble out of the bag at random? | | | | |
| 1. **Fair Problem**: It costs $12 for admission into the fair. It costs $3 per ride. (a) How much wil it cost (total) to ride on three rides? (b) How much would it cost to go on *x* number of rides? (c) If you had $42 to spend at the fair, how many rides could you go on? | | | | | | | | |
| 1. **Archery:** Katniss Everdeen wants to know if she can shoot an aarow over the top of a tree. The equation of the arrow’s height after *t* seconds can be modled with this equation . If the tree is 66 feet tall, wil Katniss be able to clear the top of the tree? | | | | | | | | |
| 1. **Baseball game**: Mr Marcus went to the Giant’s game. While he was there, he bought a soda and an order of garlic fries and spent $14. Later that night, he went back and ordered a soda and two orders of garlic fries and spent $22. How much did each soda cost Mr Marcus at the game? | | | | | | | | |
| 1. **T-shirt Business**: The HHS leadership class is considering purchasing a printing machine for $3,500. It would cost the class $4 to make each shirt, and they can sell them for $10 each. How mnay shirts would they need to sell to cover the cost of purchasing the machine? | | | | | | | | |