Name_____ Date: _____ Period: ____

Algebra Unit 1A Assessment: Solving Equations in One Variable

<u>Directions:</u> Solve each equation for the given variable. Show all work to receive full credit.

<u>Basic (BA)</u>

1) $\frac{m}{7} + 3 = -8$

2) Explain in words how to solve for *x*.
$-5x + 2 = 17$

First I would...

Then I would....

3) $4x - 7 = 29 - 2x$

4) $12x + 9 - 4x = 3$

5) $3(x - 4) = 0$

<u>Proficient (P)</u>

6) $3(3x - 4) - 2 = 22$

7) $3 - 6x = -2 - 3x + 5$

8) If you tripled a number and added seven, the total would be 43. What is the original number? Write and solve an equation that represents this situation. Label your variable.

9) The equation $2(x + 4) + 6 = 28$ has more than one solution method. Solve this equation twice, using a different first step each time.

$2(x + 4) + 6 = 28$

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Mastery (M)

10) For the equation below, is x = -4 the solution? Why or why not? Explain/Justify your answer.

$$\mathbf{40 - 5x = -5 + 5(1 - 3x)}$$

11) There are two fair cost options at the State Fair. You can pay $7 to get in and then each ride ticket will cost $2 each. The other option would be to pay $15 to get in and then only pay $1 per ride. If you purchased the second option, what is the minimum number of rides you should go on to make sure it is a better deal? Justify your answer.

12) Peter stated that there is no solution to the equation $x + 12 + 2x = 20 + 3x - 8$. Do you agree or disagree? Explain your reasoning.