Name: _____   Block: _____

Middle School Common Core Algebra Test 2: SHOW ALL WORK FOR CREDIT!

A.REI.3 Multi-Step Equations and Variables on Both Sides	POINTS:	MASTERY:
4.) Solve for x: $$-17 + \frac{10 + 9x}{2} = 16$$ Ans: _____	5.) Solve for x: $0 = -7(2x - 1) - 7(1 - 3x) - 28$ Ans: _____	6.) Solve for x: $5(x - 3) = 4(x - 8)$ Ans: _____

A.CED.4 Literal Equations	POINTS:	MASTERY:
7.) Solve for y: $6x + y = 14$ Ans: _____	8.) Solve for y: $-3x - y = 6$ Ans: _____	9.) Ms. Adams wants to know how much water she can fill her pool with and can use the formula **V = lwh** to find out. What is the height of her pool if the volume is 600 ft^3, the length is 10 ft and the width is 10 ft? Ans: _____

A.CED.4 Literal Equations Part 2	POINTS:	MASTERY:
10.) **Solve for *h*:** $S = Ph + 2B$	11.) **Solve for *l*:** $S = \frac{1}{2}Pl + B$	12.) **Solve for c:** $a^2 + b^2 = c^2$
Ans: _____	Ans: _____	Ans: _____

A.REI.3 Proportions and Conversions	POINTS:	MASTERY:
13.) $\dfrac{12}{3} = \dfrac{8}{p}$	14.) $\dfrac{2}{-3} = \dfrac{4}{6+x}$	15.) $\dfrac{8}{x+9} = \dfrac{4}{x+10}$
Ans: _____	Ans: _____	Ans: _____

A.REI.3 Multi-Step Equations and Variables on Both Sides Part 2		
16.) Solve for m: $$2m+5=5(m-7)-3m$$ Ans: _____	17.) Solve for h: $$5h-7=3+5(h-2)$$ Ans: _____	18.) Mr. Lentz tried to **solve for y** in the equation **8x + 2y = -16** and his work is shown below. Did he make a mistake? If so, **circle** his mistake and **correct it** in the box below. 8x + 2y = -16 +8x +8x 2y = 8x – 16 2 2 y= 8x – 16 2 y= 4x - 8 [ ]
19. Write an equation and solve for the variable specified. *Five less than twice a number **t** equals the sum of another number **r** and six. Solve for **t**.*	20. What is the solution of **A.** $\sqrt[3]{x} - 5 = 0$ **B.** $30 + 3x^2 = 537$	21. Write an equation and solve for the variable specified. *Half the product of a number and 32 is 24 less than 4 times that same number.*

22. The formula $s = \dfrac{w-10e}{m}$ is often used by placement services to find keyboarding speeds. In the formula, s represents the speed in words per minute, w represents the number of words typed, e represents the number of errors, and m represents the number of minutes typed. If Miguel typed 520 words in 6 minutes and received a keyboard speed of 86 words per minute, how many errors did he make?