**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equations All Types QuizM1**

**M.P. 4 Model with math for full credit!!!**

**In each of the following equations, solve for *x.* Make sure to show your work!**

**1.** $\frac{1}{2}x$ – 8 + $\frac{1}{3}x$ = 7 2**.** $ \frac{x}{5}$– 12 = -8 3**.** $\frac{2}{3}x$ – 4 = 10

**4.** 6x – 4x – 5 = -30 **5.** 2(4x – 3) = 1 **6.** -3(2x + 4) = -6

**7.**  -4x + 7 = -2x + 8 **8.**  8x – 4 = 5x – 34 **9.**  -2x + 12 = 3x – 18

**10.** -x – 6 + 3 = -2x – 5 **11.**  -5x + 9x – 6 = 2x – 8 **12.** 2x + 10 + -5x = x – 18

**13.** The side lengths of a triangle are:

Side 1: 5x + 2 Side 2: 3x + 18 Side 3: 4x + 8 – 2

If the perimeter of the triangle is 86ft, identify the following:

 a. What is the value of *x*?

 b. Which side is the shortest?

**14.** The length of a rectangle is 4(x + 2). The width of a rectangle is 6x + 2. If the perimeter of the rectangle is 200m, identify the following:

 a. what is the value of *x*?

 b. What is the value of the length and width of the rectangle?

15. What are two properties that were used to solve for *x*?

 a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Property

 b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Property