NAME: _____   DATE: _____

SOLVING EQUATIONS Practice Quiz

SHOW ALL YOUR WORK FOR FULL MARKS

1. Solve for the unknown in each of the following equations. Round final answers to two decimal places or keep as a fraction.

   a) $9(h - 2) + 7 = -6(2h + 5)$

   b) $\dfrac{-8a - 9}{3} = \dfrac{-7a + 10}{8}$

   c) $3 - 5x = 3x + 19$

   d) $\dfrac{w}{9} = -2$

2. Rearrange the following formulas **[K2]**

   a) $P = 2a + b$ (for **a**)

   b) $E = mc^2$ (for **c**)

3. The following solution contains an error. Identify the step where the error has been made and describe the error. Solve the question with the correct solution.

$$\frac{2}{7}(p-1)=2$$

Step 1: $7\left[\frac{2}{7}(p-1)\right]=2$

Step 2: $2(p-1)=2$

Step 3: $2p-2=2$

Step 4: $2p=2+2$

Step 5: $2p=4$

Step 6: $\frac{2p}{2}=\frac{4}{2}$

Step 7: $p=2$

c) Prove that your solution is correct by doing a LS = RS check for both your solution AND the incorrect solution.
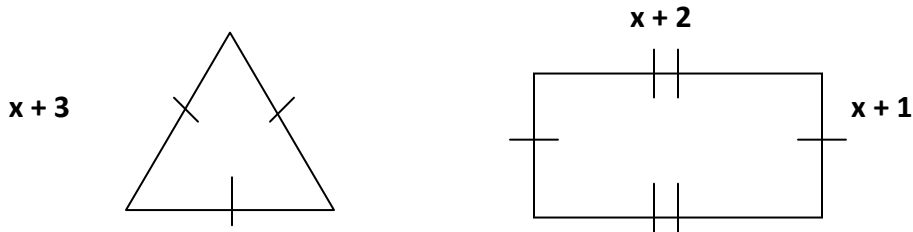
Incorrect RS = LS Check   *My RS = LS Check*

4. An equilateral triangle and a rectangle have the same perimeter.

   a) Find the side lengths (in metres) of <u>BOTH</u> the equilateral triangle <u>AND</u> the rectangle.

   x + 2

   x + 3

   x + 1

5. Lisa is 8 years older than Megan and Alyssa is 2 years younger than Megan. The sum of their ages is 42. How old is each girl? (**Remember:** Define your variables and include a final statement)

6. The sum of three consecutive odd integers is 57. Use an algebraic equation to find the integers.