Name_____

EQUIVALENT EXPRESSIONS #1

Directions: For a science project at school, Tyler was recording the temperature outside every morning before school, and every night before she went to bed. Tyler's math teacher was helping her write expressions that tracked the changes in temperature each day. Answer the questions below about Tyler's experiments and her expressions.

1) On Monday, Tyler recorded a temperature of -10 degrees first thing in the morning. Throughout the day, the temperature rose 1.5 degrees per hour. Circle *one* of the expressions below that represents the temperature changes on Monday.

a. $t = -10 + 1.5h$ *b.* $t = 10 - 1.5h$ *c.* $t = -1.5 + -10h$ *d.* $t = 1.5 + 10h$

2) On Tuesday, Tyler's thermometer showed a temperature of 12 degrees when she woke up. The temperature then rose 0.75 degrees every hour. Write an expression that represents the temperature change on Tuesday. Use the variables *t* for *temperature* and *h* for *hours*.

3) On Wednesday, Tyler's math teacher helped her write the expression $t = 8 + 2h$ to represent the temperature change for that day. Circle *all* of the expressions below that are equivalent to $t = 8 + 2h$.

a. $t = h + 8 + 2h$ *b.* $t = 8 + h + h$ *c.* $t = 4h + 6 – 2h + 2$ *d.* $t = 8 – 2h$

4) On Thursday, Tyler's math teacher helped her write the expression $t = -2(3 + h)$ to represent the temperature change for that day. Circle *all* of the expressions below that are equivalent to $t = -2(3 + h)$.

a. $t = 6 - 2h$ *b.* $t = 4h – 6h - 6$ *c.* $t = -2h - 6$ *d.* $t = h(3.5 – 5.5) + (-6)$

5) On Friday, Tyler came up with the expression $t = -0.5(1 – 2h)$ to represent the temperature change. His math teacher came up with the expression $t = 4(2h + 2) – 7h – 8.5$ for the same day. Are these expressions equivalent or not. Explain your answer.