Using The TI-73:
Simplifying Algebraic Expressions

Name _____

Look at the original expression and the simplified expression. Tell which property was used to simplify the expression. Then, substitute the given value for the variable using the TI-73 to check.

To compare the original and the simplified expressions, first substitute a value. Type a value and press STO▶ *x* ENTER.
To compare the two expression, first press 2nd MATH. Type the original expression. Then, curser to the = sign and press ENTER. Now, type the simplified expression on the right of the equal sign. Curser to Done and press ENTER ENTER. If a 0 appears, the expressions are NOT equivalent. If a 1 appears, the expressions are equivalent.

1. $3 + x + 7$
$= 3 + 7 + x$
$= 10 + x$

Property used to simplify?

Substitute 2 for x and prove equivalency.

2. $2(3x)$
$= (2 \bullet 3)x$
$= 6x$

Property used to simplify?

Substitute 5 for x and prove equivalency.

3. $1x$
$= x$

Property used to simplify?

Substitute 7.3 for x and prove equivalency.

4. $8 + (2 + r)$
$= (8 + 2) + r$
$= 10 + r$

Property used to simplify?

Substitute 6 for x and prove equivalency.

5. $4w \bullet 5$
$= 4 \bullet 5 \bullet w$
$= 20w$

Property used to simplify?

Substitute -1 for x and prove equivalency.

6. $5b + 3b$
$= (5 + 3)b$
$= 8b$

Property used to simplify?

Substitute ½ for x and prove equivalency.