

Matching Answers

Evaluating Expressions

Dana and Darla wrote some expressions and gave them to each other to evaluate. Dana was surprised when she discovered that each of the answers to the expressions she wrote matched an answer to an expression that Dana wrote. The expressions they wrote are listed below. Evaluate each expression to find the answers that match.

Dana

$$3x - y \text{ if } x = -2.6 \text{ and } y = 3.8$$

$$8a + 6b \text{ if } a = 4.6 \text{ and } b = -6.7$$

$$4c - 6d \text{ if } c = 7.9 \text{ and } d = -7.4$$

$$7w + z \text{ if } w = -6.9 \text{ and } z = -8.6$$

$$q - 9p \text{ if } q = -0.75 \text{ and } p = -1.23$$

$$5r - 6t \text{ if } r = -9.3 \text{ and } t = 6.4$$

Darla

$$6r - 2s \text{ if } r = 1.8 \text{ and } s = 7.1$$

$$3h + 2j \text{ if } h = -4.9 \text{ and } j = -21.1$$

$$10u - v \text{ if } u = 6.7 \text{ and } v = 151.9$$

$$a + 5b \text{ if } a = 7.32 \text{ and } b = 0.6$$

$$4m + n \text{ if } m = 2.2 \text{ and } n = -20.4$$

$$5x - y \text{ if } x = 10.8 \text{ and } y = -22$$

Thinking Cap



Write several pairs of expressions that have the same answers. Explain any strategies that you used to write your expressions.

Matching Answers

Evaluating Expressions

Topic: Evaluating Expressions

Objective: To use the calculator to evaluate expressions.

NCTM Standards: Reasoning, Algebra

Using the Activity

Students use the calculator in this activity to evaluate expressions.

- The $\boxed{+/-}$ key can be used to enter negative numbers.

Example To evaluate Dana's first expression, enter 3 $\boxed{\times}$ 2.6 $\boxed{+/-}$ $\boxed{-}$ 3.8 $\boxed{=}$. The result is -11.6 . After all of the expressions have been evaluated, match this expression with the expression from Darla's list that has the same answer.

Assessment Each expression in Dana's list has the same answer as that of an expression in Darla's list. If this is not true, then they should evaluate the expressions again.

Answers

Dana Expression 1: See example above. Expression 2: 8 $\boxed{\times}$ 4.6 $\boxed{+}$ 6 $\boxed{\times}$ 6.7 $\boxed{+/-}$ $\boxed{=}$ -3.4 Expression 3: 4 $\boxed{\times}$ 7.9 $\boxed{-}$ 6 $\boxed{\times}$ 7.4 $\boxed{+/-}$ $\boxed{=}$ 76 Expression 4: 7 $\boxed{\times}$ 6.9 $\boxed{+/-}$ $\boxed{+}$ 8.6 $\boxed{+/-}$ $\boxed{=}$ -56.9 Expression 5: .75 $\boxed{+/-}$ $\boxed{-}$ 9 $\boxed{\times}$ 1.23 $\boxed{+/-}$ $\boxed{=}$ 10.32 Expression 6: 5 $\boxed{\times}$ 9.3 $\boxed{+/-}$ $\boxed{-}$ 6 $\boxed{\times}$ 6.4 $\boxed{=}$ -84.9

Darla Expression 1: 6 $\boxed{\times}$ 1.8 $\boxed{-}$ 2 $\boxed{\times}$ 7.1 $\boxed{=}$ -3.4 Expression 2: 3 $\boxed{\times}$ 4.9 $\boxed{+/-}$ $\boxed{+}$ 2 $\boxed{\times}$ 21.1 $\boxed{+/-}$ $\boxed{=}$ -56.9 Expression 3: 10 $\boxed{\times}$ 6.7 $\boxed{-}$ 151.9 $\boxed{=}$ -84.9 Expression 4: 7.32 $\boxed{+}$ 5 $\boxed{\times}$.6 $\boxed{=}$ 10.32 Expression 5: 4 $\boxed{\times}$ 2.2 $\boxed{+}$ 20.4 $\boxed{+/-}$ $\boxed{=}$ -11.6 Expression 6: 5 $\boxed{\times}$ 10.8 $\boxed{-}$ 22 $\boxed{+/-}$ $\boxed{=}$ 76

Matches: Dana's answer to expression 1, Darla's answer to expression 5; Dana's answer to expression 2, Darla's answer to expression 1; Dana's answer to expression 3, Darla's answer to expression 6; Dana's answer to expression 4, Darla's answer to expression 2; Dana's answer to expression 5, Darla's answer to expression 4; Dana's answer to expression 6, Darla's answer to expression 3.

Thinking Cap

Answers may vary. See students' work.