

Set B1 ★ Independent Worksheet 1



INDEPENDENT WORKSHEET

Bowling for Equations

1 Jose is playing a game of Roll-a-Fact with his brother, Marco. On his first roll, Jose got 2, 1, and 4. Below are some of the equations he wrote. Read each and decide if it is true or false according to the order of operations. If an equation is false, rewrite it on the line so it is true.

ex $2 \times 4 - 1 = 6$ T or **(F)** $2 \times (4 - 1) = 6$

a $4 \div (1 \times 2) = 2$ T or F _____

b $1 + 4 \times 2 = 10$ T or F _____

c $4 \times 2 \div 1 = 8$ T or F _____

d $4 + 2 - 1 = 5$ T or F _____

Order of operations

1. Do anything inside parentheses first.
2. Multiply or divide in order, left to right.
3. Add or subtract in order, left to right.

2 Marco got 4, 2, and on his first roll. Solve the equations below to figure out the third number Marco rolled. Remember to use the order of operations.

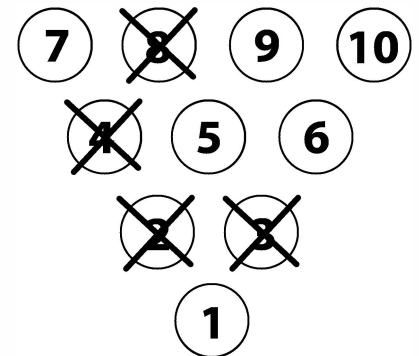
a $2 \times 4 - \square = 2$

b $\square + 4 \div 2 = 8$

c $\square - 4 \div 2 = 4$

d $2 \times \square \div 4 = 3$

e Marco rolled 4, 2, and .



3 Use Marco's 3 numbers to knock over the 1, 5, and 7 pins. Write your equations on the lines below. Cross out the pins.

a $1 =$ _____

b $5 =$ _____

c $7 =$ _____

Set B1 ★ Independent Worksheet 2



INDEPENDENT WORKSHEET

Expressions, Variables & Situations

1 To evaluate an expression, you have to replace the variable with a number so you can find the answer. Evaluate each of the expressions below.

Expression	Evaluate if $x = 8$	Evaluate if $x = 24$	Evaluate if $x = 400$
ex $3x$	$3 \times 8 = 24$	$3 \times 24 = 72$	$3 \times 400 = 1,200$
a $4x$			
b $x - 8$			
c $x \div 4$			
d $2x + 5$			
e $(x \div 2) + 29$			

2 Mr. Brown got 3 boxes of envelopes. He gave 4 of the envelopes to his son. Which expression shows how many envelopes Mr. Brown has left?

- $3b \times 4$

 $3b + 4$

 $3b \div 4$

 $3b - 4$

3 Eloise and Dylan are picking cherries. So far, they have picked 5 boxes of cherries, and Dylan has 2 more cherries in his hand. Which expression shows how many cherries Eloise and Dylan have picked?

- $2b + 5$

 $5b + 2$

 $2 \times 5b$

 $7b$

4 Write a situation to match each of the expressions below. The variable b stands for box, but you can choose whatever you want to put in the box.

Expression	Situation
ex $b \div 2$	Kara got a box of jellybeans. She divided the jellybeans evenly with her sister.
a $19 + b$	
b $2b$	
c $b + 12$	

Set B1 ★ Independent Worksheet 3



INDEPENDENT WORKSHEET

Solving & Writing Equations

Order of Operations

1. If there are parentheses, do whatever is inside them first.
2. Multiply and divide left to right.
3. Add and subtract from left to right.

1 Find the answer to each problem below. Use the order of operations. Show your work.

example $25 + 2 \times 6 = \underline{37}$

$$\begin{array}{r} 2 \times 6 = 12 \\ 25 + 12 = 37 \end{array}$$

a $20 \div 4 \times 3 = \underline{\quad}$ **b** $6 + 15 \div 3 = \underline{\quad}$ **c** $12 \times (2 + 3) = \underline{\quad}$

d $(12 + 16) \div 7 = \underline{\quad}$ **e** $14 \times 3 \div 6 = \underline{\quad}$ **f** $63 \div 9 \times 7 = \underline{\quad}$

2 Circle the letter to show whether each equation below is true or false. Remember to use the order of operations.

a $25 = 5 \times 3 + 10$ T or F **b** $5 \times 4 \times 3 = 4 \times 3 \times 5$ T or F

c $12 - 6 \times 2 = 129 - 129$ T or F **d** $100 \div 2 + 3 = 20$ T or F

e $27 = 9 \times 6 \div 2$ T or F **f** $3 + 5 \times 8 = 64$ T or F

3 Solve each of the equations below:

a $z \times 10 = 700$ $z = \underline{\quad}$ **b** $18 = 3x$ $x = \underline{\quad}$

c $15 + 3 \times 3 = 6y$ $y = \underline{\quad}$ **d** $120 \div m = 20$ $m = \underline{\quad}$

4 Write and solve an equation for each of the word problems below:

ex Ebony had 45 stickers. She gave some of the stickers to her sister. Now Ebony has 20 stickers. How many stickers did Ebony give to her sister?

$$45 - s = 20 \quad s = 25 \quad \text{Ebony gave 25 stickers to her sister.}$$

a Mrs. Grace had 75 erasers. She divided the erasers evenly among all of her students. Each student got 3 erasers. How many students are there in Mrs. Grace's class?

b Bottled water is on sale for \$13 a case. Jon and his mom got several cases for the soccer team. They spent \$65. How many cases of bottled water did they buy?

c Mrs. Jones brought 3 of the cases of bottled water to the soccer tournament. There were 72 bottles of water in all. How many bottles were there in each case?



CHALLENGE

5 Solve these algebra puzzles.

<p>a $3 \times \bigcirc = 27$ $\square \div \bigcirc = 4$ $(\bigcirc + \text{pentagon}) \times \square = 360$</p>	<p>b $200 \div \bigcirc = 20$ $\bigcirc \times \square = 600$ $\square - \bigcirc \div \text{pentagon} = 58$</p>
<p>$\bigcirc = \underline{\quad}$ $\square = \underline{\quad}$ $\text{pentagon} = \underline{\quad}$</p>	<p>$\bigcirc = \underline{\quad}$ $\square = \underline{\quad}$ $\text{pentagon} = \underline{\quad}$</p>

6 Circle the T or F to show whether each equation below is true or false.

a $47 = 3n + 2$ if the value of n is 15. T or F

b $4z \div (3 + 3) = 10$ if the value of z is 12. T or F