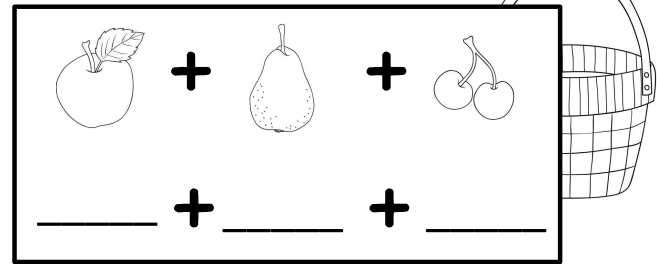


EVALUATING EXPRESSIONS

Farmer Marcell is harvesting fruit from her orchards. The picture at the right shows a symbolic expression for the number of pieces of fruit in her basket.



- a. Substitute the value of each fruit to determine the total amount of fruit harvested.

= 13

= 14

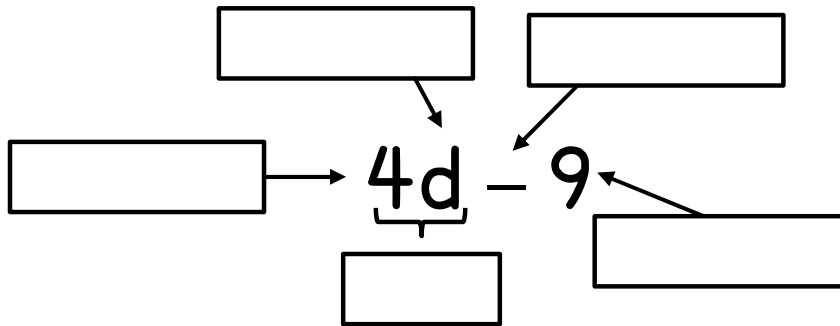
= 30

- b. Rewrite the expression using the letters "a", "p" and "c" to represent each fruit symbol.

EXPRESSIONS

- An expression is a mathematical phrase that contains _____, _____, and _____.
- A _____ is used in mathematical expressions to represent an unknown numerical value.

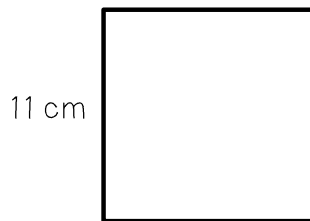
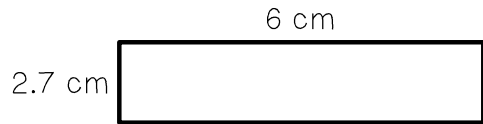
Label all the parts of the expression below.



For 1-3, evaluate the expression if $x = 7$, $y = 3$, and $z = 2$.

1. $x + (y + z)$	2. $z(x) + y - z$	3. $y^2 - z^2$
4. Evaluate $7x + 5y + 3$, if $x = 8$ and $y = 6$.	5. List all the parts of the expression in example 4. Terms: _____ Variables: _____ Coefficients of variables: _____ Constants: _____	

Evaluating expressions is commonly used when _____ values into formulas to solve real world problems. Use the formulas to complete the tables below by evaluating the expressions.

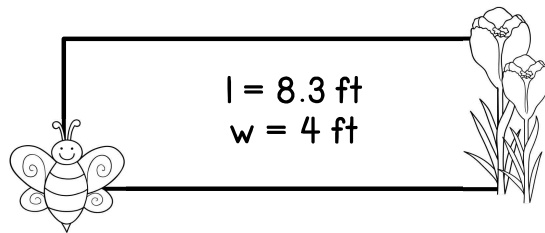


FORMULA	$A = bh$
EXPRESSION	
SIMPLIFY	

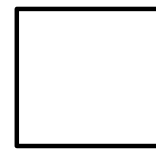
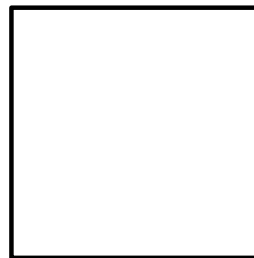
FORMULA	$A = s^2$
EXPRESSION	
SIMPLIFY	

Apply your understanding of evaluating expressions to answer the questions below.

6. Darius is building a fence around his rectangular butterfly garden. The length and width of his garden are shown below. Use the formula for the perimeter of a rectangle, $P = 2l + 2w$, to find the total distance around the garden.



7. Two squares are shown below. Evaluate the expression $b^2 - c^2$ to find the difference between the area of the two squares.




8. Renee made an error as she evaluated the expression $4x + y^2$, when $x = 10$ and $y = 2$. Determine her error and then correctly evaluate the expression.

$4x + y^2$ $410 + 2^2$ 414

Summarize today's lesson:

EVALUATING EXPRESSIONS

Match each correct answer to a letter to complete the riddle below.

1 $5x + 9y$, when $x = 8$, $y = 11$	6 $12a - 3b^2$, when $a = 9$, $b = 4$
2 $a^3 - c + b$, when $a = 3$, $b = 6$, $c = 8$	7 $11(d - c) + 3(c + d)$, when $c = 6$, $d = 9$
3 $4(g - h) + 10$, when $g = 12$, $h = 7$	8 $g^3 - h^2 + 8$, when $g = 3$, $h = 5$
4 $8 - 2z + 3(x + y)$, when $x = 4$, $y = 9$, $z = 3$	9 The dimensions of a rectangle are given below. Evaluate $P = 2l + 2w$. <div style="border: 1px solid black; padding: 5px; display: inline-block;"> $l = 9$ $w = 3$ </div>
5 $k^3 - 4j + 12$, when $k = 8$, $j = 2$	10 The screen of a tablet is shaped like a rectangle. Find the area of the screen by evaluating $A = bh$, when $b = 7$ in and $h = 11$ in. 

W: 25	C: 12	U: 516	H: 78	R: 24	L: 139
M: 68	B: 127	F: -36	N: 2	O: 30	A: 60
Y: 77	Q: 969	D: 210	E: 41	P: 51	T: 10

WHAT DO VARIABLES ASK EACH OTHER WHEN THEY MEET?

_____ 'S _____ ?
 2 7 6 8 10 3 5 9 1 4 8 8 4 9