

EVALUATING EXPRESSIONS

Use the key below to complete the joke.

WHAT'S THE KING OF THE PENCIL BOX?

THE RULER

KEY:



Now, replace the following mathematical messages and evaluate them.

KEY:



$(\triangle \div \bigcirc) + \square = 7$
 $(24 \div 8) + 4 = 7$
 $3 + 4 = 7$

$\triangle - (\bigcirc + \square) = 12$
 $24 - (8 + 4) = 12$
 $24 - 12 = 12$

EVALUATING EXPRESSIONS

- When a letter stands in the place of a Number, it is called a Variable.
- A variable represents a Specific number in each Expression.

Evaluate the following expressions, if $x=7$, $y=3$, and $z=2$.

1. $x + (y + z)$

$7 + (3 + 2)$
 $7 + 5$
 12

2. $z(x) + y - z$

3. $y^2 - z^2$

4. $7x + 5y$

5. $z^2 + 9y - 3x$

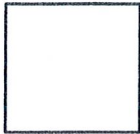
$2^2 + 9(3) - 3(7)$
 $4 + 9(3) - 3(7)$
 $4 + 27 - 21$
 $31 - 21$

10

Evaluating expressions is commonly used when Substituting values into geometry formulas.

Use the formula $A = s^2$ to find the area of each of the squares below. Substitute the side length into s to represent the side length. Solve to find A , the area.

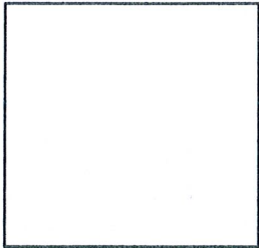
5 cm



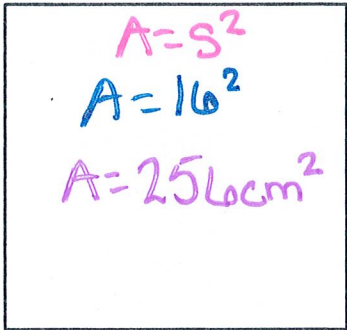
6.5

$A = s^2$
 $A = 5^2$
 $A = 25 \text{ cm}^2$

11 cm



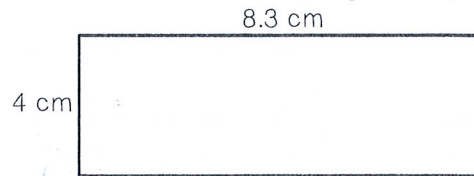
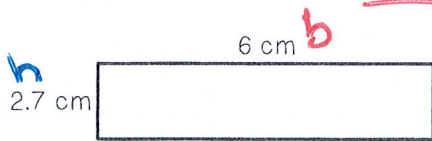
16 cm



16.16

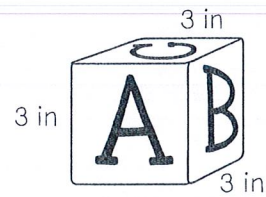
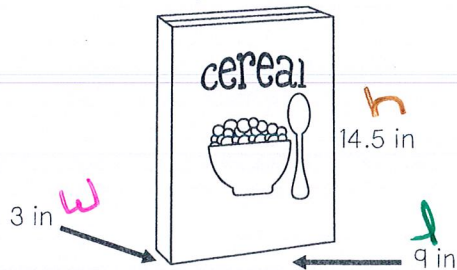
$A = s^2$
 $A = 16^2$
 $A = 256 \text{ cm}^2$

Use the formulas $V = lwh$ and $A = bh$ to complete the tables below by evaluating the expressions.



FORMULA	$A = bh$
EXPRESSION <small>*NO = sign</small>	$6 \cdot 2.7$
SOLVE	16.2 cm^2

FORMULA	
EXPRESSION	
SOLVE	



FORMULA	$V = lwh$
EXPRESSION	$9 \cdot 3 \cdot 14.5$
SOLVE	$V = 391.5 \text{ in}^3$

FORMULA	
EXPRESSION	
SOLVE	

Summarize today's lesson:

EVALUATING EXPRESSIONS

Show work

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

1	$5x + 9y$, when $x=8$, $y=11$	$5(8) + 9(11)$ $40 + 99$ <u>139</u>
2	$a^3 - c + b$, when $a=3$, $b=6$, $c=8$	
3	$4(g - h) + 10$, when $g=12$, $h=7$	
4	$42 - 5z + 3(x + y)$, when $x=4$, $y=9$, $z=7$	
5	$k^3 - 4j + 12$, when $k=8$, $j=2$	
6	$12a - 3b^2$, when $a=9$, $b=4$	
7	$11(d - c) + 3(c + d)$, when $c=6$, $d=9$	
8	$g^3 - h^2 + 8$, when $g=3$, $h=5$	
9	$100 - x^2 + 15$, when $x=9$	

A: 10	E: 45	R: 516	K: 46	B: 8
J: 17	I: 25	E: 105	J: 18	M: 139
H: 34	N: 97	T: 30	C: 60	S: 78

WHAT DO YOU GET IF YOU CROSS A MATH TEACHER AND A CLOCK?

_____ M _____
8 5 2 3 9 1 8 3 2 6 4 7