Math 6: Week of May 18th

Unit: Introduction to Algebra

Lesson 7: Evaluating Expressions

Target: Evaluate algebraic expressions

Unit: Geometry

Lesson 1: Area~ Parallelograms

Target: Find the area of parallelograms using specific formulas.

Directions:

- Go through the slides (notes) and work through the examples on a separate piece of paper. If you have your math notebook, use it!
- Complete the practice problems on a separate piece of paper.
- Check your answers with the key given at the end of the lesson. If you got one wrong, double check your steps with your notes and recalculate it.
- Are you stuck?
  1. Use Google Classroom or Gmail to ask Mrs. Thomas a question.
  2. Live video helps sessions: Thursdays at 9:30am using Meet through Google Classroom

Lesson 7

Vocabulary:

Evaluate: To find the value of an expression. (To solve)

How to Evaluate an Expression

1. Rewrite the expression by replacing the variable(s) with the given value(s). (Substitute the variable for the number given.)
2. Follow the order of operations. (PEMDAS) Solve it!

Examples

Evaluate each algebraic expression.

$p + 4$ when $p = 7$

$(7) + 4$

11

Replace p with 7. Solve!

$9x$ when $x = 3$

$9(3)$

27

Replace x with 3. Solve!

*Remember, $9x$ means 9 times x.

$\frac{y}{3} + 1$ when $y = 24$

$\frac{(24)}{3} + 1$

$8 + 1$

9

Replace y with 24. Solve!

Examples Continued

Evaluate the algebraic expression when: $x = 3,\ y = 10,\ z = 5.$

$4x - y$

$4(3) - 10$

$12 - 10$

2

$\frac{y}{2z} + x$

$\frac{(10)}{2(5)} + (3)$

$\frac{(10)}{10} + (3)$

$1 + (3)$

4

If there is more than one variable, replace them all at once, then solve!

Last Example… :)

Shari's Taxi Service charges customers an initial fee of $5 plus $0.50 per mile driven for each ride in Portland. The algebraic expression representing this fee is $5 + 0.50m$, where m is the total number of miles driven during one ride. Use a table to show how much rides of 6 miles, 15 miles and 24 miles would cost Shari's customers.

Miles Driven	$5 + 0.50m$
6	$5 + 0.5(6) = 5 + 3 = \$8.00$
15	$5 + 0.5(15) = 5 + 7.5 = \$12.50$
24	$5 + 0.5(24) = 5 + 12 = \$17.00$

Unit: Geometry, Lesson 1

Area of Parallelograms

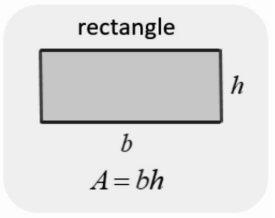
Vocabulary-

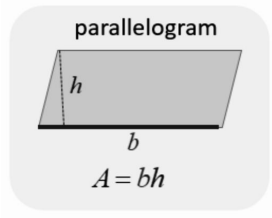
Area: The number of square units needed to cover it without any gaps or overlaps.

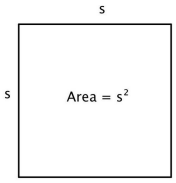
Area Formula: $A = lw$ *(length x width)*

$A = bh$ *(base x height)*

Parallelogram: A type of quadrilateral with two sets of parallel sides. (This can include squares and rectangles too!)







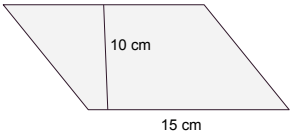
Square: All sides must be equal.

side x side = base x height = length x width

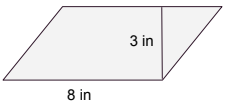
***These are all the same for a square, just different vocabulary.

Examples

Find the area for each parallelogram.



A= 10 x 15
A= 150 cm²



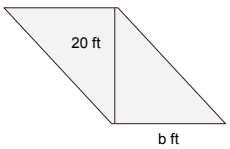
A= 8 x 3
A= 24 in²

Area Formula: $\mathcal{A} = lw$ OR $\mathcal{A} = bh$

Examples Continued

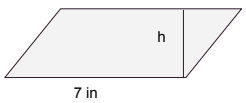
Find the missing side for each parallelogram.

Area Formula: $\mathcal{A} = lw$ OR $\mathcal{A} = bh$



A= 240 ft²
h = 20 ft
b = ?

240 = 20 x b
*what number times 20 equals 240?
240 ÷ 20 = b
12 ft = b

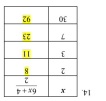


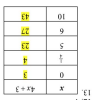
A= 35 in²
b = 7 in
h = ?

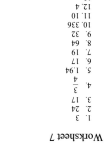
35 = 7 x h
*what number times 7 equals 35?
35 ÷ 7 = b
5 in = b

Practice Problems: Worksheets

Lesson 7 ~ Evaluating Expressions (Algebra)
Lesson 1 ~ Area of Parallelograms (Geometry)



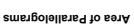




Check your work!

Worksheet Answers Provided Here!

If you're stuck, ASK! Live Meet help sessions are provided every Thursday at 9:30am. Check Google Classroom for more information.



1. Done for you
2. 35 cm²
3. 81 yd²
4. 13 in
5. 3.4 m
6. 2.5 yd (2 ½ yd)
7. 0.5 in
8. 9 3/100 m²
9. 1,225 cm²
10. 7 mm
11. 65.65 cm²
12. 4 in

Lesson 7 ~ Evaluating Expressions

Name_____ Period_____ Date_____

Evaluate each expression.

1. $t-4$ when $t=7$

2. $8d$ when $d=3$

3. $5x-3$ when $x=4$

4. $\frac{1}{4}+z$ when $z=\frac{1}{2}$

5. $1.8k+0.5$ when $k=0.8$

6. $\frac{y}{3}+10$ when $y=21$

Evaluate each expression when $a=4,\ b=7$ **and** $c=12$.

7. $3a+b$

8. $4(c+a)$

9. $c-2a+4b$

10. $4bc$

11. $\frac{c}{a}+b$

12. $\frac{4+c}{a}$

Complete each table by evaluating the given expression for the values listed.

13.

x	$4x+3$
0	
$\frac{1}{4}$	
5	
6	
10	

14.

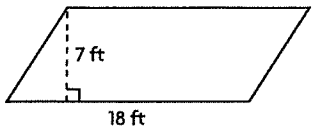
x	$\frac{6x+4}{2}$
2	
3	
7	
30	

Name _____

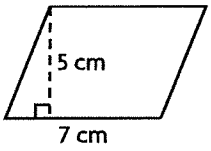
Area of Parallelograms

COMMON CORE STANDARD CC.6.G.1
Solve real-world and mathematical problems involving area, surface area, and volume.

Find the area of the figure.

1. 

$A = bh$
$A = 18 \times 7$
$A = 126 \text{ ft}^2$

2. 

_____ cm^2

Find the unknown measurement for the figure.

3. square

$A =$ _____

$s = 9$ yd

4. parallelogram

$A = 247 \text{ in.}^2$

$b = 19$ in.

$h =$ _____

5. parallelogram

$A = 9.18 \text{ m}^2$

$b = 2.7$ m

$h =$ _____

6. parallelogram

$A = 8\frac{3}{4} \text{ yd}^2$

$b = 3\frac{1}{2}$ yd

$h =$ _____

7. parallelogram

$A = 0.2 \text{ in.}^2$

$b =$ _____

$h = 0.4$ in.

8. parallelogram

$A =$ _____

$b = 4\frac{3}{10}$ m

$h = 2\frac{1}{10}$ m

9. square

$A =$ _____

$s = 35$ cm

10. parallelogram

$A = 6.3 \text{ mm}^2$

$b =$ _____

$h = 0.9$ mm

Problem Solving REAL WORLD

11. Ronna has a sticker in the shape of a parallelogram. The sticker has a base of 6.5 cm and a height of 10.1 cm. What is the area of the sticker?

_____

12. A parallelogram-shaped tile has an area of 48 in.^2. The base of the tile measures 12 in. What is the measure of its height?

_____