

6th Grade
April 14, 2021

Today we will:

- Review WS and video notes
- Take some more notes in class
- Begin HW

HOMEWORK:

Practice WS

THQ due FRIDAY

ALEKS time and topics due Monday night



HOMEWORK
 Name _____
 Unit _____ Lesson _____ Due Date _____

Name _____ My Homework _____

Independent Practice

Go online for Step-by-Step Solutions



MP Use Math Tools Complete each function table. (Examples 1–3)

1.

| Input (x) | $3x + 5$ | Output |
|-----------|-----------------|--------|
| 0 | $3 \cdot 0 + 5$ | 5 |
| 3 | $3 \cdot 3 + 5$ | 14 |
| 9 | $3 \cdot 9 + 5$ | 32 |

2.

| Input (x) | $x - 4$ | Output |
|-----------|----------|--------|
| 4 | $4 - 4$ | 0 |
| 8 | $8 - 4$ | 4 |
| 11 | $11 - 4$ | 7 |

3.

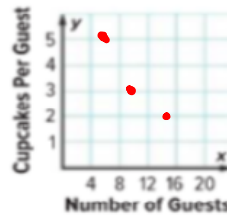
| Input (x) | $x + 2$ | Output |
|-----------|---------|--------|
| 0 | $0 + 2$ | 2 |
| 1 | $1 + 2$ | 3 |
| 6 | $6 + 2$ | 8 |

4.

| Input (x) | $2x + 4$ | Output |
|-----------|------------------|--------|
| 7 | $2 \cdot 7 + 4$ | 18 |
| 9 | $2 \cdot 9 + 4$ | 22 |
| 15 | $2 \cdot 15 + 4$ | 34 |

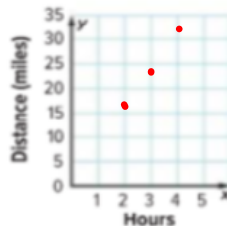
5. Whitney has a total of 30 cupcakes for her guests. The function rule, $30 \div x$ where x is the number of guests, can be used to find the number of cupcakes per guest. Make a table of values that shows the number of cupcakes each guest will get if there are 6, 10, or 15 guests. Then graph the function. (Examples 1 and 2)

| Number of Guests (x) | $30 \div x$ | Cupcakes per Guest (y) |
|----------------------|--------------|------------------------|
| 6 | $30 \div 6$ | 5 (6, 5) |
| 10 | $30 \div 10$ | 3 |
| 15 | $30 \div 15$ | 2 |




6. Bella rollerblades 8 miles in one hour. The function rule that represents this situation is $8x$, where x is the number of hours. Make a table to find how many hours she has skated when she has traveled 16, 24, and 32 miles. Then graph the function. (Examples 3 and 4)

| Hours (x) | $8x$ | Miles (y) |
|-----------|-------------|-----------|
| 2 | $8 \cdot 2$ | 16 |
| 3 | $8 \cdot 3$ | 24 |
| 4 | $8 \cdot 4$ | 32 |



7. Refer to Exercise 6. How many miles would Bella travel if she skated for 7 hours? $8 \cdot 7 = 56$ miles


 Name _____
 Unit ____ Lesson ____ Due Date ____

VIDEO NOTES

Function Rules . 8 - 2

Use words and symbols to describe the value of each term as a function of its position. Then find the value of the tenth term in the sequence. Subtract three

1.

| | | | | | | |
|---------------|-----|---|---|---|---|---|
| Position | (n) | 5 | 6 | 7 | 8 | n |
| Value of Term | | 2 | 3 | 4 | 5 | ■ |

Function rule: n-3

Value of 10th term: 7

Multiply by six

2.

| | | | | | | |
|---------------|--|---|----|----|----|---|
| Position | | 1 | 2 | 3 | 4 | n |
| Value of Term | | 6 | 12 | 18 | 24 | ■ |

Function rule: 6n

Value of 10th term: 60

3.

| Weeks Overdue (x) | Fee (\$) |
|-------------------|----------|
| 1 | 3 |
| 2 | 5 |
| 3 | 7 |
| 4 | 9 |
| x | ■ |

$1 \times 2 + 1$
 $2 \times 2 + 1$
 $3 \times 2 + 1$

Times two plus one

Function rule: 2n+1

Value of 10th term: 21

More Examples of Finding Function Rules, Lesson 2

1. Describe the relationship between the terms in the arithmetic sequence 7, 14, 21, 28, Then write the next three terms.

Rule: Add 7

Next 3 terms: 35, 42, 49

Arithmetic sequence: Add (or subtract)
to each term to get the next one

More Examples of Finding Function Rules, Lesson 2

2. Describe the relationship between the terms in the geometric sequence 2, 4, 8, 16, Then write the next three terms.

Rule: Multiply by 2

Next 3 terms: 32, 64, 128

Geometric sequence: Multiply (or divide)
each term to get the next one

More Examples of Finding Function Rules, Lesson 2

3. Use words and symbols to describe the value of each term as a function of its position. Then find the value of the tenth term.

| | | | | | |
|---------------|---|---|---|----|-----|
| Position | 1 | 2 | 3 | 4 | n |
| Value of Term | 3 | 6 | 9 | 12 | ■ |

10

Words: Multiply by 3

Symbols: $3n$

10^{th} term: $3n = 3 \cdot 10 = 30$



NAME _____ DATE _____ PERIOD _____

Chapter 8 Lesson 2 Practice

Function Rules

Example for rule in words: "subtract three" or "multiply by five"
 Example for expression using n : " $n-3$ " or " $5n$ "

Use words and symbols to describe the value of each term as a function of its position. Then find the value of the sixteenth term in the sequence.

1.

| | | | | | |
|---------------|---|----|----|----|-----|
| Position | 2 | 3 | 4 | 5 | n |
| Value of Term | 8 | 12 | 16 | 20 | ■ |

Rule in words: _____

Expression using n : _____

Value of 16th term: _____

2.

| | | | | | |
|---------------|----|----|----|----|-----|
| Position | 8 | 9 | 10 | 11 | n |
| Value of Term | 14 | 15 | 16 | 17 | ■ |

Rule in words: _____

Expression using n : _____

Value of 16th term: _____

3.

| | | | | | |
|---------------|----|----|----|----|-----|
| Position | 11 | 12 | 13 | 14 | n |
| Value of Term | 4 | 5 | 6 | 7 | ■ |

Rule in words: _____

Expression using n : _____

Value of 16th term: _____

4.

| | | | | | |
|---------------|----|----|----|----|-----|
| Position | 21 | 22 | 23 | 24 | n |
| Value of Term | 12 | 13 | 14 | 15 | ■ |

Rule in words: _____

Expression using n : _____

Value of 16th term: _____

NAME _____ DATE _____ PERIOD _____

Determine how the next term in each sequence can be found. Then find the next two terms in the sequence.

5. 3, 16, 29, 42, ...

6. 21, 25, 29, 33, ...

7. 1.2, 3.5, 5.8, 8.1, ...

Rule: _____**Rule:** _____**Rule:** _____**Next 2 terms:** _____, _____**Next 2 terms:** _____, _____**Next 2 terms:** _____, _____**Find the missing number in each sequence.**8. 5, ■, 10, $12\frac{1}{2}$, ... _____

9. 11.5, 9.4, ■, 5.2, ... _____

10. 40, ■, $37\frac{1}{3}$, 36, ... _____

11. MEASUREMENT There are 52 weeks in 1 year. In the space at the right, make a table and write a function rule relating the number of weeks to the number of years for 1, 2, 3, and n years. Then find Hana's age in weeks if she is 11 years old.

Rule: _____**Hannah's age:** _____ weeks

12. SCIENCE A bacteria population increases every hour. At 12 P.M., there are 5 cells. At 1 P.M., there are 10 cells. At 2 p.m., there are 20 cells. At 3 p.m., there are 40 cells. If this pattern continues, how many cells will there be at 7 p.m.? Make a table below.

At 7 p.m., there will be _____ cells.