$\qquad$
$\qquad$
1.5

## Qlgetbral Qofenda

Stamp

| $\begin{aligned} & 10 \\ & 0 \\ & 0 \\ & 2 \\ & 2 \end{aligned}$ | 9/21/2015 | Objective: | Arithmetic Sequences |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Assignment: | Practice \#1-9 |  |
| $\begin{aligned} & 7 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | 9/22/2015 | Objective: | Geometric Sequences |  |
|  |  | Assignment: | Practice \#1-13 |  |
| $\begin{aligned} & 7 \\ & \frac{10}{0} \\ & 0 \\ & \frac{1}{8} \\ & \vdots \\ & 3 \end{aligned}$ | 9/23/2015 | Objective: | Review |  |
|  |  | Assignment: | Study!!! |  |
|  | 9/24/2015 | Objective: | Test Unit 2 |  |
|  |  | Assignment: | None |  |
| 1001010 | 9/25/2015 | Objective: | BR |  |
|  |  | Assignment: | HW 1.5 Due! |  |

Final Weekly HW Grade: $\qquad$

| Monday: $1^{\text {st }}$ Attempt (D0 NOT ERASE) ${ }^{\text {correct So }}$ | Correct Solution: |
| :---: | :---: |
| Tuesday: ${ }^{\text {st }}$ Attempt (D0 NOT ERASE) ${ }^{\text {a }}$ Correct So | Correct Solution: |
| Wednesday: $1^{\text {st }}$ Attempt (D0 NOT ERASE) ${ }^{\text {correct So }}$ | Correct Solution: |
| Thursday: $1^{\text {st }}$ Attempt (D0 NOT ERASE) ( 0 (rrect So | Correct Solution: |
| Friday: $1^{\text {st }}$ Attempt (D0 NOT ERASE) $\quad$ Gorrect So | Gorrect Solution: |
| Warm Up Expectations: <br> - Try warm up problem(s) on your own on the "First Attempt" side. <br> - Politely request teacher signature when complete before timer goes off. <br> - Gopy the correct work/solution in the right-hand box. <br> - Ask questions © <br> When absent... <br> Write the word "ABSENT" on the first attempt column for 2 points. Copy the correct solution from a shoulder partner on the correct solution column for 1 point. |  |

## Student Practice - Arithmetic Sequences as Functions

Name
Date
Period
Determine if the sequences below are arithmetic. Explain why or why not. If it is, what is the common difference?

1. $15.5,28,40.5,53,65.5, \ldots$
2. $2,4,6,4,2, \ldots$

Answer the following questions below about the following sequence.
3. Use a graph of the sequence to determine the next three terms in the sequence below.

$$
3,5,7,9,
$$

$\qquad$ , $\qquad$ , $\qquad$


Find the nth term given an arithmetic sequence.
4. $4.5,6,7.5,9,10.5, \ldots$
5. $5,-13,-31, \ldots$

Find the $12^{\text {th }}$ term of the arithmetic sequence using the nth term.
6. $9,16,23,30, \ldots$
7. $24,19,14,9,4, \ldots$

Answer the questions below. Show all work.
8. If $a_{5}=45$ and $d=3$, then what is the nth term of the arithmetic sequence?
9. If $a_{6}=11$ and $d=-4$, then what is the $12^{\text {th }}$ term of the arithmetic sequence?

## Student Practice - Geometric Sequences as Functions

Name $\qquad$ Date $\qquad$ Period $\qquad$
Determine whether the sequence is arithmetic or geometric. Explain why.

1. $35,32,29,26, \ldots$
2. $2, \frac{1}{2}, \frac{1}{8}, \frac{1}{32}, \frac{1}{128}, \ldots$
3. $2,4,8,16,32, \ldots$
4. $9,14,19,24, \ldots$

State the common ratio, $r$, for each geometric sequence. Then find the next three terms for each.
5. $7,14,28,56$, $\qquad$ , $\qquad$ , _-_-_-
6. $-729,81,-9,1$, $\qquad$ , $\qquad$ , $\qquad$
$r=$ $\qquad$ $r=$ $\qquad$

I dentify the first $\mathbf{4}$ terms given the formula for the following geometric sequences:
7. $\mathrm{a}_{\mathrm{n}}=8 \cdot(-2)^{\mathrm{n}-1}$
8. $a_{n}=\frac{1}{4} \cdot(4)^{n-1}$
 $\qquad$

Find a formula for the " nth " term for a geometric sequence:
9. $2,10,50,250, \ldots$
10. $-0.25,2,-16,128, \ldots$
$\mathrm{a}_{1}=\ldots---\quad$
$\mathrm{a}_{1}=$ _---_
$r=$ $\qquad$ $r=$ $\qquad$
$a_{n}=$ $\qquad$ $a_{n}=$ $\qquad$
11. $16,4,1, \frac{1}{4}, \frac{1}{16}, \ldots$
12. First term is 20 and common ratio is $\frac{1}{2}$.
$\mathrm{a}_{1}=$ $\qquad$
$r=$ $\qquad$
$a_{n}=$ $\qquad$
13. Find the $11^{\text {th }}$ term when the first term is 3 and the common ratio is 2 .
$\qquad$

## Domain \& Range

1. State the domain and range of the following set of ordered pairs.
$\{(-3,6),(0,4),(3,5),(-2,-6),(1,10)\}$
Domain:
Range:
$\qquad$
2. Find the range for the equation $3 x+2 y=-4$ if the domain is $\{-2,-1,0\}$
3. What is the range of the function shown on the graph?

4. State the domain and range of the graph shown below.

5. What is the domain of the function shown in the graph?

6. State the Domain and Range.


## Sequences

7. If n represents a number's position in the sequence, write the first four numbers in the sequence described by the expression, $n(n-8)+3$
8. Which equation can be used to find the nth term in the following sequence, where n represents a number's position in the sequence?

| Position in <br> Sequence | 1 | 3 | 6 | 9 | n |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Term | 5 | 9 | 15 | 21 |  |

A. $a_{n}=n+4$
B. $a_{n}=4 n+1$
C. $a_{n}=2 n+3$
D. $a_{n}=2 n$
10. Find the common difference for this arithmetic sequence $5,9,13,17 \ldots$
11. Find a formula for the sequence
$1,3,5,7, \ldots$

Given the first term and the common difference of an arithmetic sequence find the first five terms and the formula.
12. $a_{1}=28, d=10$
13. $a_{1}=-38, d=-100$

Determine if the sequence is geometric. If it is, find the common ratio.
14. $-1,6,-36,216, \ldots$
15. $-1,1,4,8, \ldots$

Given the first term and the common ratio of a geometric sequence find the first five terms and the formula.
16. $a_{1}=0.8, r=-5$
17. $a_{1}=1, r=2$

## Functions

Determine which of the relations below are functions. State yes if the relation is a function and no if the relation is not a function.
18.

| $x$ | $y$ |
| :---: | :---: |
| 0 | -19 |
| 1 | -12 |
| 2 | -4 |
| 3 | 3 |
| 4 | 13 |
| 5 | 27 |

22. 


19.

| $x$ | $y$ |
| :---: | :---: |
| -2 | -7 |
| 0 | 5 |
| -2 | -16 |
| 2 | 0 |
| 3 | 6 |
| 4 | 4 |

20. 


21.

25.

23.

24.

27.

28. Which of the following represents a function?
A.

B. $\{(1,2),(2,3),(3,2),(3,4)\}$
C.

| $x$ | 2 | 3 | 4 | 3 |
| :---: | :---: | :---: | :---: | :---: |
| $y$ | 1 | 2 | 3 | 4 |

D.

29. Which of the following sets of ordered pairs does not represent $y$ as a function of $x$ ?
A. $\{(-2,5),(1,1),(2,4),(3,-6),(-3,0)\}$
B. $\{(-2,-2),(1,1),(2,2),(3,3),(-3,-3)\}$
C. $\{(-2,5),(-6,3),(-2,4),(3,-6),(0,0)\}$
D. $\{(-2,4),(-1,1),(2,4),(3,9),(-3,9)\}$

## Evaluating

30. If $f(x)=x^{2}+3 x+12$, find $f(-3)$
31. If $f(x)=\frac{2}{3} x^{2}+8 x$, what is the value of $f(6)$ ?
32. $(x, 7)$ is a solution of $3 x+4 y=-8$. What is the value of $x$ ?
33. Use the given graph to find....
A. The value of $f(6)$
B. The value(s) of $x$ where $f(x)=4$

Total Distance Traveled


