

Agenda for Today 5/2/18

1. Test Taking Strategies PPT
2. EOC Review (Unit 2)
3. EOC Review (Unit 1)
4. EOC Review - Constructed Response

TAKE A DEEP BREATH,
go with the flow.
Just do your best
AND
SHOW WHAT YOU KNOW!

Believe In
Yourself!!

You Can

Do It!!!

Try Your
BEST!!

Don't

Give Up!

Take Your
Time!

Double
Check Your
Work!

GSE Algebra 1

EOC Review

Spring 2018

Name: _____ Date: _____ Block: _____



UNIT 1: RELATIONSHIPS BETWEEN QUANTITIES AND EXPRESSIONS



A) Unit 1: Properties of Rational and Irrational Numbers

1. Look at the radical.

$$-8\sqrt{726}$$

What is a rewritten form of the radical?

- A. $-88\sqrt{6}$
- B. -90.75
- C. $-986\sqrt{6}$
- D. $-2,904$

2. Look at the expression.

$$2\sqrt{8} \cdot \sqrt{20}$$

Which of these is equivalent to this expression?

- A. $2\sqrt{28}$
- B. 5
- C. $8\sqrt{10}$
- D. $32\sqrt{10}$

3. Which sum is rational?

- A. $\pi + 18$
- B. $\sqrt{25} + 1.75$
- C. $\sqrt{3} + 5.5$
- D. $\pi + \sqrt{2}$

4. Which product is irrational?

- A. $\sqrt{2} \cdot \sqrt{50}$
- B. $\sqrt{64} \cdot \sqrt{4}$
- C. $\sqrt{9} \cdot \sqrt{49}$
- D. $\sqrt{10} \cdot \sqrt{8}$

$$\sqrt{2} \cdot \sqrt{50} = \sqrt{2 \cdot 50}$$

B) Unit 1: Reason Quantitatively and Use Units to Solve Problems

1. A rectangle has a length of 12 meters and a width of 400 centimeters. What is the perimeter, in cm, of the rectangle?

- A. 824 cm
 B. 1,600 cm
 C. 2,000 cm
 D. 3,200 cm

1200 cm
 K H D B D C M
 m

162 sec
 120 sec

2. Jill swam 200 meters in 2 minutes 42 seconds. If each lap is 50 meters long, which is MOST LIKELY to be her time, in seconds, per lap?

- A. 32 seconds
 B. 40 seconds
 C. 48 seconds
 D. 60 seconds

3. The formula for density d is $d = \frac{m}{v}$, where m is mass and v is volume. If mass is measured in kilograms and volume is measured in cubic meters, what is the unit for density?

$\frac{\text{kg}}{\text{meter}^3}$ or

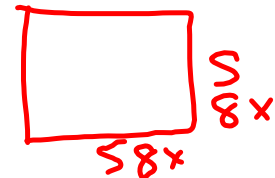
C) Unit 1: Expressions

1. In which expression is the coefficient of term " n " - 1?

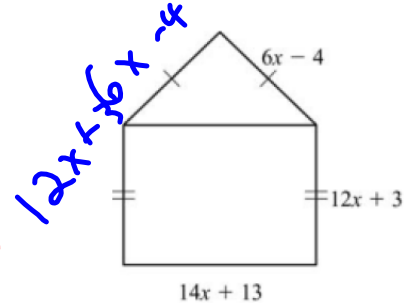
- A. $3n^2 + 4n - 1$
 B. $-n^2 + 5n + 4$
 C. $-2n^2 - n + 5$

2. The expression s^2 is used to calculate the area of a square, where s is the side length of the square. What does the expression $(8x)^2$ represent?

- A. the area of a square with a side length of 8
- B. the area of a square with a side length of 16
- C. the area of a square with a side length of $4x$
- D. the area of a square with a side length of $8x$**



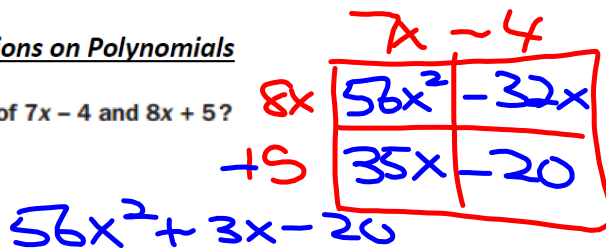
2. A model of a house is shown.



D) Unit 1: Operations on Polynomials

1. What is the product of $7x - 4$ and $8x + 5$?

- A. $15x + 1$
- B. $30x + 2$
- C. $56x^2 + 3x - 20$**
- D. $56x^2 - 3x + 20$



3. Which expression has the same value as the expression $(8x^2 + 2x - 6) - (5x^2 - 3x + 2)$?

- A. $3x^2 - x - 4$
- B. $3x^2 + 5x - 8$**
- C. $13x^2 - x - 8$
- D. $13x^2 - 5x - 4$

What is the perimeter, in units, of the model?

- A. $32x + 12$ units
- B. $46x + 25$ units
- C. $50x + 11$ units**
- D. $64x + 24$ units



UNIT 2: REASONING WITH LINEAR EQUATIONS AND INEQUALITIES



A) Unit 2: Solving Equations and Inequalities in One Variable

1. This equation can be used to find h , the number of hours it will take Flo and Bryan to mow their lawn.

$$2 \cdot \frac{h}{3} + \frac{h}{6} = 1$$

$$\frac{2h}{6} + \frac{h}{6} = 1$$

$$\frac{3h}{6} = 1$$

$$\frac{3h}{3} = \frac{6}{3}$$

How many hours will it take them to mow their lawn?

- A. 6 hours
 B. 3 hours
 C. 2 hours
 D. 1 hour

2. A ferry boat carries passengers back and forth between two communities on the Peachville River.

- It takes 30 minutes longer for the ferry to make the trip upstream than downstream.
- The ferry's average speed in still water is 15 miles per hour.
- The river's current is usually 5 miles per hour.

This equation can be used to determine how many miles apart the two communities are.

$$\frac{m}{15-5} = \frac{m}{15+5} + 0.5$$

$$\frac{m}{10} = \frac{m}{20} + 0.5$$

What is m , the distance between the two communities?

- A. 0.5 mile
 B. 5 miles
 C. 10 miles
 D. 15 miles

$$2 \cdot \frac{m}{10} - \frac{m}{20} = 0.5$$

$$\frac{2m}{20} - \frac{m}{20} = 0.5$$

$$\frac{m}{20} = 0.5 \cdot 20$$

$$m = 10$$

3. For what values of x is the inequality $\frac{2}{3} + \frac{x}{3} > 1$ true?

- ~~A.~~ $x < 1$
- B.** $x > 1$
- C. $x < 5$
- D. $x > 5$

$$\frac{2+x}{3} > 1$$

4. Look at the steps used when solving $3(x - 2) = 3$ for x .

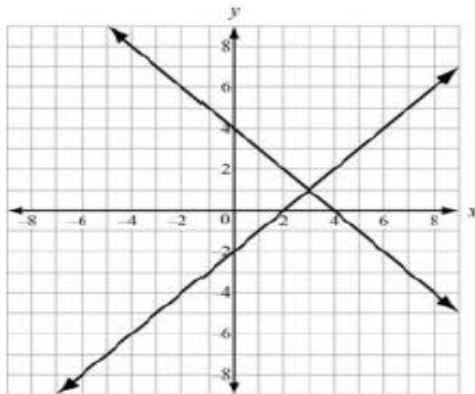
$3(x - 2) = 3$	Write the original equation.
$3x - 6 = 3$	Use the Distributive Property.
$3x - 6 + 6 = 3 + 6$	Step 1
$3x = 9$	Step 2
$\frac{3x}{3} = \frac{9}{3}$	Step 3
$x = 3$	Step 4

Which step is the result of combining like terms?

- A.** Step 1
- B. Step 2
- C. Step 3
- D. Step 4

B) Unit 2: Solving Systems of Two Linear Equations

1. Two lines are graphed on this coordinate plane.



Which point appears to be a solution of the equations of both lines?

- A. (0, -2)
 B. (0, 4)
 C. (2, 0)
 D. (3, 1)
2. Based on the tables, at what point do the lines $y = -x + 5$ and $y = 2x - 1$ intersect?

$y = -x + 5$	
x	y
-1	6
0	5
1	4
2	3
3	2

$y = 2x - 1$	
x	y
-1	-3
0	-1
1	1
2	3
3	5

- A. (1, 1)
 B. (3, 5)
 C. (2, 3)
 D. (3, 2)

3. Look at the tables of values for two linear functions, $f(x)$ and $g(x)$.

x	$f(x)$	x	$g(x)$
-1	16	-1	-18
0	7	0	-14
1	4	1	-10
3	-2	3	-2
5	-8	5	6
7	-14	7	14

4. Which ordered pair is a solution of $3y + 2 = 2x - 5$?

- A. $(-5, 2)$
 B. $(0, -5)$
 C. $(5, 1)$
 D. $(7, 5)$

$$3(1) + 2 = 2(5) - 5$$

$$5 = 5$$

What is the solution to $f(x) = g(x)$?

The solution is $(3, -2)$

5. A manager is comparing the cost of buying baseball caps from two different companies.

- Company X charges a \$50 fee plus \$7 per baseball cap.
- Company Y charges a \$30 fee plus \$9 per baseball cap.

For what number of baseball caps will the cost be the same at both companies?

- A. 10
 B. 20
 C. 40
 D. 100

$$50 + 7x = 30 + 9x$$

$$7x - 9x = 30 - 50$$

$$-2x = -20$$

$$x = 10$$

6. A shop sells one-pound bags of peanuts for \$2 and three-pound bags of peanuts for \$5. If 9 bags are purchased for a total cost of \$36, how many three-pound bags were purchased?

- A. 3
 B. 6
 C. 9
 D. 18

$$2x + 5y = 36$$

$$x + y = 9$$

$$x = 9 - y$$

$$2(9 - y) + 5y = 36$$

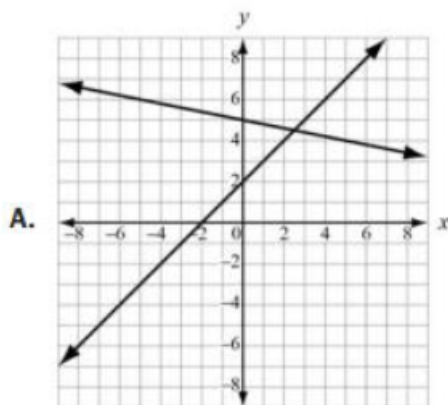
$$18 - 2y + 5y = 36$$

$$3y = 36 - 18$$

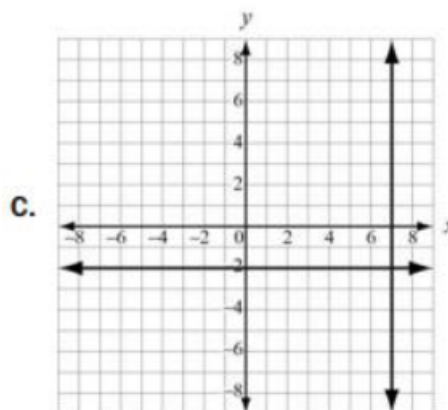
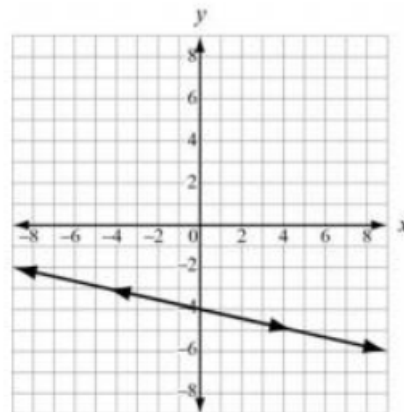
$$3y = 18$$

$$y = 6$$

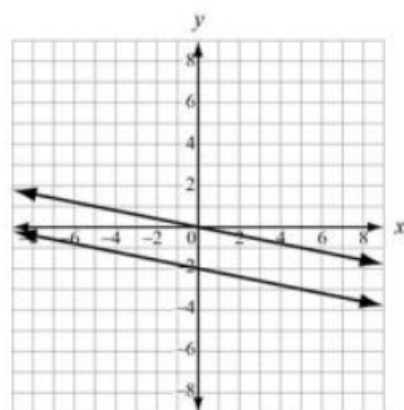
7. Which graph represents a system of linear equations that has multiple common coordinate pairs?



B.



D.

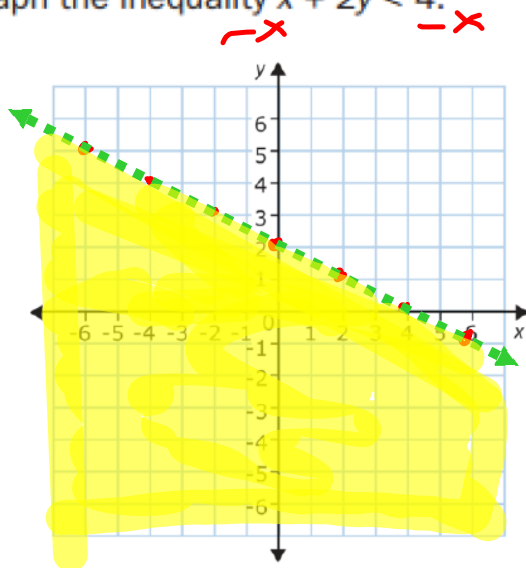


C) Unit 2: Solving Equations and Inequalities in One Variable

1. Every year Silas buys fudge at the state fair. He buys two types: peanut butter and chocolate. This year he intends to buy \$24 worth of fudge. If chocolate costs \$4 per pound and peanut butter costs \$3 per pound, what are the different combinations of fudge that he can purchase if he only buys whole pounds of fudge?

$$3x + 4y \leq 24$$

2. Graph the inequality $x + 2y < 4$.



$$2y < 4 - x$$

$$\frac{2y}{2} < \frac{-x + 4}{2}$$

$$y < -\frac{1}{2}x + 2$$

$$m = -\frac{1}{2} \quad b = 2$$

D) Unit 2: Build a Function That Models a Relationship between Two Quantities

1. Which function represents the sequence?

$$d = 7 \quad a_1 = 3$$

n	1	2	3	4	5	...
a_n	3	10	17	24	31	...

- A. $f(n) = n + 3$
 B. $f(n) = 7n - 4$
 C. $f(n) = 3n + 7$
 D. $f(n) = n + 7$

$$a_n = a_1 + (n-1)d$$

$$a_n = 3 + (n-1)7$$

$$a_n = 3 + 7n - 7$$

$$= 7n - 4$$

2. Each week, Tim wants to increase the number of sit-ups he does daily by 2 sit-ups. The first week, he does 15 sit-ups each day.

$$a_1 = 15 \quad d = 2$$

Write an explicit function in the form $f(n) = mn + b$ to represent the number of sit-ups, $f(n)$, Tim does daily in week n .

$$f(n) = 2n + 13$$

$$a_n = 15 + (n-1)2$$

$$15 + 2n - 2$$

Unit 2: Understand the Concept of a Function and Use Function Notation

1. Look at the sequence in this table.

n	1	2	3	4	5	...
a_n	-1	1	3	5	7	...

Which function represents the sequence?

- A. $a_n = a_{n-1} + 1$
 B. $a_n = a_{n-1} + 2$
 C. $a_n = 2a_{n-1} - 1$
 D. $a_n = 2a_{n-1} - 3$

2. Consider this pattern.



Which function represents the sequence that represents the pattern?

- A. $a_n = a_{n-1} - 3$
- B. $a_n = a_{n-1} + 3$
- C. $a_n = 3a_{n-1} - 3$
- D. $a_n = 3a_{n-1} + 3$

3. Which function is modeled in this table?

x	$f(x)$
1	8
2	11
3	14
4	17

- A. $f(x) = x + 7$
- B. $f(x) = x + 9$
- C. $f(x) = 2x + 5$
- D. $f(x) = 3x + 5$

4. Which explicit formula describes the pattern in this table?

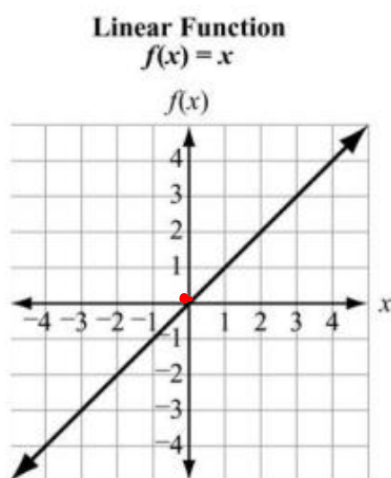
d	C
2	6.28
3	9.42
5	15.70
10	31.40

- A. $d = 3.14 \times C$
- B. $3.14 \times C = d$
- C. $31.4 \times 10 = C$
- D. $C = 3.14 \times d$

5. If $f(12) = 4(12) - 20$, which function gives $f(x)$?

- A. $f(x) = 4x$
- B. $f(x) = 12x$
- C. $f(x) = 4x - 20$
- D. $f(x) = 12x - 20$

6. Consider the graph of $f(x) = x$. It appears to be an unbroken line and slanted upward.



List the following features:

Domain: $(-\infty, \infty)$ or \mathbb{R}

Range: $(-\infty, \infty)$ or \mathbb{R}

x-intercept: $(0, 0)$

y-intercept: $(0, 0)$

Increasing: $(-\infty, \infty)$

Decreasing: no

Positive: $x > 0$

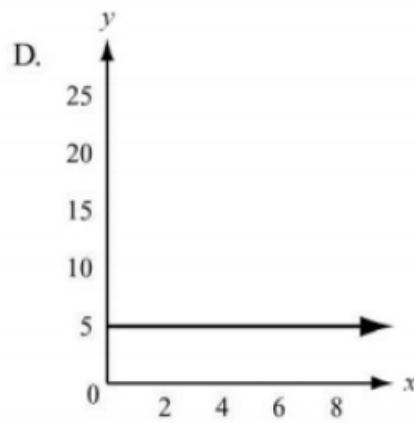
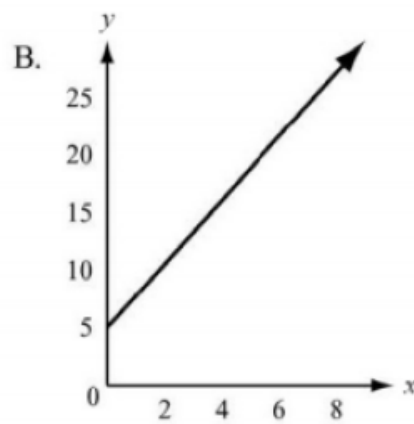
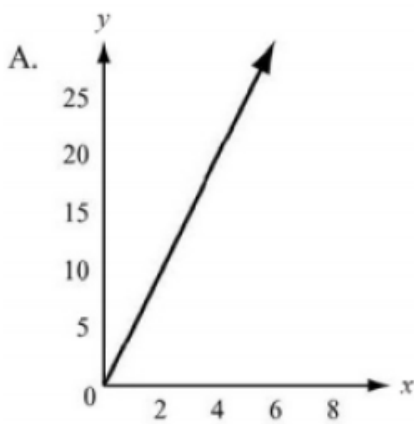
Negative: $x < 0$

End behavior: $x \rightarrow -\infty; y \rightarrow -\infty$

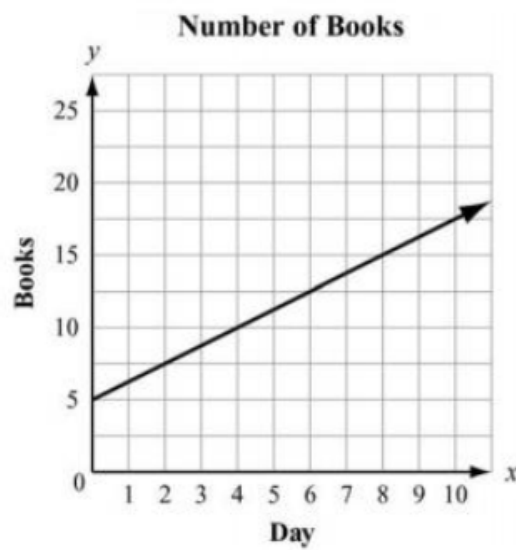
$x \rightarrow \infty; y \rightarrow \infty$

E) Unit 2: Analyze Functions Using Different Representations

1. To rent a canoe, the cost is \$3 for the oars and life preserver, plus \$5 an hour for the canoe. Which graph models the cost of renting a canoe?



2. Juan and Patti decided to see who could read more books in a month. They began to keep track after Patti had already read 5 books that month. This graph shows the number of books Patti read for the next 10 days and the rate at which she will read for the rest of the month.



If Juan does not read any books before day 4 and he starts reading at the same rate as Patti for the rest of the month, how many books will he have read by day 12?

- A. 5
- B. 10**
- C. 15
- D. 20