

Name: _____

Date: _____

03_ Expressions and Equations

Try Now: _

1. Solve for x: $2x - 3 = 17$

2. Solve for x: $4(x + 1) - 2 = -6$

3. Solve for n: $\frac{2n}{3} - 19 = 7$

Model #1

Solve for x: $5x - 14 = -5 + 8x$

Answer: _____

Model # 2

Solve for y: $8y - (5y + 2) = 16$

Answer: _____

Model #3

Solve for x: $9x + 4 - 3x = 4(2x - 6)$

Answer: _____

CFU_Think-Pair-Share

1. In the expression $\frac{x}{5} - 3$, which is the correct order of the operations done to x ?

- (1) x was divided by 5, and the result was then subtracted from 3
- (2) x had 3 from it, and then the result was then divided by 5
- (3) x was divided by 5, and then 3 was subtracted from the result
- (4) 5 was divided by x , and then 3 was subtracted from the result

For #2 – 5, solve the equations by listing the order of operations happening to the variable being solved for, then doing the opposite from the bottom of your list to the top. Don't forget, if there are multiple terms with the variable in it, you will have to either combine like terms and/or Rover, Rover.

2. Solve for x : $4x + 3 = 17$

What happened to x ?

1.

2.

3. Solve for x : $-6(x - 1) = 18$

What happened to x ?

1.

2.

4. Solve for x : $5(x - 3) + 2x = 4(x + 3)$

What happened to x ?

1.

2.

Model #4_Literal Equations_

Solve for a in the equation $c = \frac{ra}{2}$

Model #5_Fractional Equations

Solve for x: $-\frac{3x}{5} + 2 = 11$

Model #6_Fractional Equations

$$\frac{2x}{5} + 1 = \frac{13}{5}$$

Guided Practice_

1. Using the area formula $A = LW$ (where A is area, l is length, and w is width), which of the following formulas would you use to solve for width?

- a. $W = A \cdot L$
- b. $W = L / A$
- c. $W = A / L$
- d. $W = L + A$

2. Given the formula for perimeter of a rectangle $P = 2l + 2w$ (where P is perimeter, l is length, and w is width), which formula would you use to solve for length?

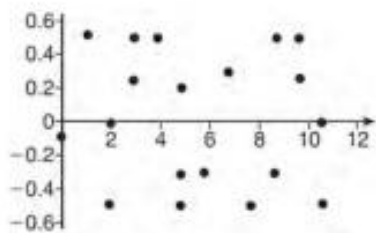
- a. $l = (P - 2w) / 2$
- b. $l = (P - 2w) \cdot 2$
- c. $l = (2w - P) / 2$
- d. $l = P - w$

3. Given the formula $(x + y) / 3 = 5$. Solve for x .

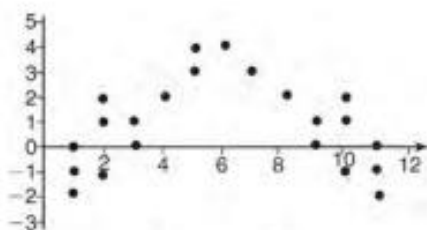
- a. $x = 8 - y$
- b. $x = 8 + y$
- c. $x = 15 - y$
- d. $x = 15 + y$

Regent Questions_

- 44 The residual plots from two different sets of bivariate data are graphed below.



Graph A



Graph B

Explain, using evidence from graph A and graph B, which graph indicates that the model for the data is a good fit.

EXPRESSIONS AND EQUATIONS

A.SSE.A.1: DEPENDENT AND INDEPENDENT VARIABLES

- 45 The formula for the surface area of a right rectangular prism is $A = 2lw + 2hw + 2lh$, where l , w , and h represent the length, width, and height, respectively. Which term of this formula is *not* dependent on the height?
- 1) A
 - 2) $2lw$
 - 3) $2hw$
 - 4) $2lh$

A.SSE.A.1: MODELING EXPRESSIONS

- 46 To watch a varsity basketball game, spectators must buy a ticket at the door. The cost of an adult ticket is \$3.00 and the cost of a student ticket is \$1.50. If the number of adult tickets sold is represented by a and student tickets sold by s , which expression represents the amount of money collected at the door from the ticket sales?
- 1) $4.50as$
 - 2) $4.50(a + s)$
 - 3) $(3.00a)(1.50s)$
 - 4) $3.00a + 1.50s$
- 47 An expression of the fifth degree is written with a leading coefficient of seven and a constant of six. Which expression is correctly written for these conditions?
- 1) $6x^5 + x^4 + 7$
 - 2) $7x^6 - 6x^4 + 5$
 - 3) $6x^7 - x^5 + 5$
 - 4) $7x^5 + 2x^2 + 6$
- 48 When multiplying polynomials for a math assignment, Pat found the product to be $-4x + 8x^2 - 2x^3 + 5$. He then had to state the leading coefficient of this polynomial. Pat wrote down -4 . Do you agree with Pat's answer? Explain your reasoning.

- 49 Andy has \$310 in his account. Each week, w , he withdraws \$30 for his expenses. Which expression could be used if he wanted to find out how much money he had left after 8 weeks?

1) $310 - 8w$
2) $280 + 30(w - 1)$
3) $310w - 30$
4) $280 - 30(w - 1)$

- 50 Konnor wants to burn 250 Calories while exercising for 45 minutes at the gym. On the treadmill, he can burn 6 Cal/min. On the stationary bike, he can burn 5 Cal/min. If t represents the number of minutes on the treadmill and b represents the number of minutes on the stationary bike, which expression represents the number of Calories that Konnor can burn on the stationary bike?

1) b
2) $5b$
3) $45 - b$
4) $250 - 5b$

A.REI.B.3: SOLVING LINEAR EQUATIONS

- 51 Which value of x satisfies the equation

$$\frac{7}{3} \left(x + \frac{9}{28} \right) = 20?$$

1) 8.25
2) 8.89
3) 19.25
4) 44.92

- 52 What is the value of x in the equation

$$\frac{x-2}{3} + \frac{1}{6} = \frac{5}{6}?$$

1) 4
2) 6
3) 8
4) 11

- 53 An equation is given below.

$$4(x - 7) = 0.3(x + 2) + 2.11$$

The solution to the equation is

1) 8.3
2) 8.7
3) 3
4) -3

- 54 Which value of x satisfies the equation

$$\frac{5}{6} \left(\frac{3}{8} - x \right) = 16?$$

1) -19.575
2) -18.825
3) -16.3125
4) -15.6875

- 55 The value of x which makes

$$\frac{2}{3} \left(\frac{1}{4}x - 2 \right) = \frac{1}{5} \left(\frac{4}{3}x - 1 \right) \text{ true is}$$

1) -10
2) -2
3) $-9.\overline{09}$
4) $-11.\overline{3}$

A.CED.A.1-3: MODELING LINEAR EQUATIONS

- 56 Donna wants to make trail mix made up of almonds, walnuts and raisins. She wants to mix one part almonds, two parts walnuts, and three parts raisins. Almonds cost \$12 per pound, walnuts cost \$9 per pound, and raisins cost \$5 per pound. Donna has \$15 to spend on the trail mix. Determine how many pounds of trail mix she can make. [Only an algebraic solution can receive full credit.]

- 57 Kendal bought x boxes of cookies to bring to a party. Each box contains 12 cookies. She decides to keep two boxes for herself. She brings 60 cookies to the party. Which equation can be used to find the number of boxes, x , Kendal bought?
- 1) $2x - 12 = 60$
 - 2) $12x - 2 = 60$
 - 3) $12x - 24 = 60$
 - 4) $24 - 12x = 60$

- 60 A parking garage charges a base rate of \$3.50 for up to 2 hours, and an hourly rate for each additional hour. The sign below gives the prices for up to 5 hours of parking.

Parking Rates	
2 hours	\$3.50
3 hours	\$9.00
4 hours	\$14.50
5 hours	\$20.00

Which linear equation can be used to find x , the additional hourly parking rate?

- | | |
|---------------------------|------------------------|
| 1) $9.00 + 3x = 20.00$ | 3) $2x + 3.50 = 14.50$ |
| 2) $9.00 + 3.50x = 20.00$ | 4) $2x + 9.00 = 14.50$ |

- 58 John has four more nickels than dimes in his pocket, for a total of \$1.25. Which equation could be used to determine the number of dimes, x , in his pocket?

- 1) $0.10(x + 4) + 0.05(x) = \1.25
- 2) $0.05(x + 4) + 0.10(x) = \1.25
- 3) $0.10(4x) + 0.05(x) = \$1.25$
- 4) $0.05(4x) + 0.10(x) = \$1.25$

- 59 A gardener is planting two types of trees:

Type A is three feet tall and grows at a rate of 15 inches per year.

Type B is four feet tall and grows at a rate of 10 inches per year.

Algebraically determine exactly how many years it will take for these trees to be the same height.

A.CED.A.4: TRANSFORMING FORMULAS

- 61 Sandy programmed a website's checkout process with an equation to calculate the amount customers will be charged when they download songs. The website offers a discount. If one song is bought at the full price of \$1.29, then each additional song is \$.99. State an equation that represents the cost, C , when s songs are downloaded. Sandy figured she would be charged \$52.77 for 52 songs. Is this the correct amount? Justify your answer.
- 62 A cell phone company charges \$60.00 a month for up to 1 gigabyte of data. The cost of additional data is \$0.05 per megabyte. If d represents the number of additional megabytes used and c represents the total charges at the end of the month, which linear equation can be used to determine a user's monthly bill?
- $c = 60 - 0.05d$
 - $c = 60.05d$
 - $c = 60d - 0.05$
 - $c = 60 + 0.05d$
- 63 A typical cell phone plan has a fixed base fee that includes a certain amount of data and an overage charge for data use beyond the plan. A cell phone plan charges a base fee of \$62 and an overage charge of \$30 per gigabyte of data that exceed 2 gigabytes. If C represents the cost and g represents the total number of gigabytes of data, which equation could represent this plan when more than 2 gigabytes are used?
- $C = 30 + 62(2 - g)$
 - $C = 30 + 62(g - 2)$
 - $C = 62 + 30(2 - g)$
 - $C = 62 + 30(g - 2)$
- 64 The formula for the volume of a cone is $V = \frac{1}{3} \pi r^2 h$. The radius, r , of the cone may be expressed as
- $\sqrt{\frac{3V}{\pi h}}$
 - $\sqrt{\frac{V}{3\pi h}}$
 - $3\sqrt{\frac{V}{\pi h}}$
 - $\frac{1}{3}\sqrt{\frac{V}{\pi h}}$
- 65 The formula for the area of a trapezoid is $A = \frac{1}{2} h(b_1 + b_2)$. Express b_1 in terms of A , h , and b_2 . The area of a trapezoid is 60 square feet, its height is 6 ft, and one base is 12 ft. Find the number of feet in the other base.
- 66 The equation for the volume of a cylinder is $V = \pi r^2 h$. The positive value of r , in terms of h and V , is
- $r = \sqrt{\frac{V}{\pi h}}$
 - $r = \sqrt{V\pi h}$
 - $r = 2V\pi h$
 - $r = \frac{V}{2\pi}$

- 67 The distance a free falling object has traveled can be modeled by the equation $d = \frac{1}{2}at^2$, where a is acceleration due to gravity and t is the amount of time the object has fallen. What is t in terms of a and d ?

- 1) $t = \sqrt{\frac{da}{2}}$
- 2) $t = \sqrt{\frac{2d}{a}}$
- 3) $t = \left(\frac{da}{d}\right)^2$
- 4) $t = \left(\frac{2d}{a}\right)^2$

- 68 The volume of a large can of tuna fish can be calculated using the formula $V = \pi r^2 h$. Write an equation to find the radius, r , in terms of V and h . Determine the diameter, to the *nearest inch*, of a large can of tuna fish that has a volume of 66 cubic inches and a height of 3.3 inches.

- 69 Michael borrows money from his uncle, who is charging him simple interest using the formula $I = Prt$. To figure out what the interest rate, r , is, Michael rearranges the formula to find r . His new formula is r equals

- 1) $\frac{I-P}{t}$
- 2) $\frac{P-I}{t}$
- 3) $\frac{I}{Pt}$
- 4) $\frac{Pt}{I}$

- 70 The formula for the sum of the degree measures of the interior angles of a polygon is $S = 180(n - 2)$. Solve for n , the number of sides of the polygon, in terms of S .

- 71 Solve the equation below for x in terms of a .
 $4(ax + 3) - 3ax = 25 + 3a$

- 72 Boyle's Law involves the pressure and volume of gas in a container. It can be represented by the formula $P_1 V_1 = P_2 V_2$. When the formula is solved for P_2 , the result is

- 1) $P_1 V_1 V_2$
- 2) $\frac{V_2}{P_1 V_1}$
- 3) $\frac{P_1 V_1}{V_2}$
- 4) $\frac{P_1 V_2}{V_1}$

- 73 The formula for blood flow rate is given by

$F = \frac{P_1 - P_2}{r}$, where F is the flow rate, p_1 the initial pressure, p_2 the final pressure, and r the resistance created by blood vessel size. Which formula can *not* be derived from the given formula?

- 1) $p_1 = Fr + p_2$
- 2) $p_2 = p_1 - Fr$
- 3) $r = F(p_2 - p_1)$
- 4) $r = \frac{P_1 - P_2}{F}$

Name: _____

Date: _____

03_ Expressions and Equations

Exit Ticket

Directions: Solve each equation for 'p' (SHOW YOUR WORK PLEASE!)



1. $p + y = z$

a. $p = yz$

b. $p = zy$

c. $p = z - y$

d. $p = pyz$

2. $a = b + cp$

a. $p = ba + cp$

b. $p = \frac{a-b}{c}$

c. $p = abc$

d. $p = c + a + b$

3. $n + r = p - r$

a. $p = n + r = r$

b. $p = npr$

c. $p = r(n + r)$

d. $p = n + 2r$

Name: _____

Date: _____

04_ Rate of Change

Try Now_

N.Q.A.2: USING RATE

Show all of your work

Patricia is trying to compare the average rainfall of New York to that of Arizona. A comparison between these two states for the months of July through September would be best measured in

- 1) feet per hour
- 2) inches per hour
- 3) inches per month
- 4) feet per month

A two-inch-long grasshopper can jump a horizontal distance of 40 inches. An athlete, who is five feet nine, wants to cover a distance of one mile by jumping. If this person could jump at the same ratio of body-length to jump-length as the grasshopper, determine, to the *nearest jump*, how many jumps it would take this athlete to jump one mile.

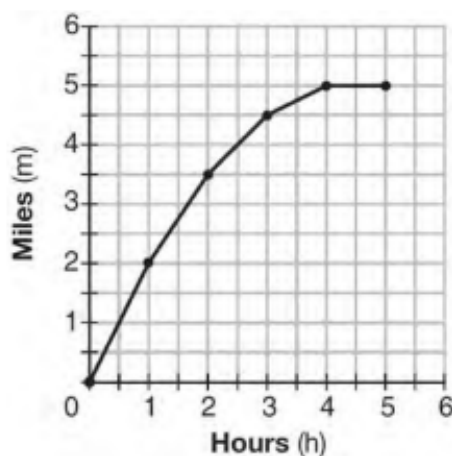
The distance traveled is equal to the rate of speed multiplied by the time traveled. If the distance is measured in feet and the time is measured in minutes, then the rate of speed is expressed in which units? Explain how you arrived at your answer.

Model_

An airplane leaves New York City and heads toward Los Angeles. As it climbs, the plane gradually increases its speed until it reaches cruising altitude, at which time it maintains a constant speed for several hours as long as it stays at cruising altitude. After flying for 32 minutes, the plane reaches cruising altitude and has flown 192 miles. After flying for a total of 92 minutes, the plane has flown a total of 762 miles. Determine the speed of the plane, at cruising altitude, in miles per minute. Write an equation to represent the number of miles the plane has flown, y , during x minutes at cruising altitude, only. Assuming that the plane maintains its speed at cruising altitude, determine the total number of miles the plane has flown 2 hours into the flight.

Model #2 and 3

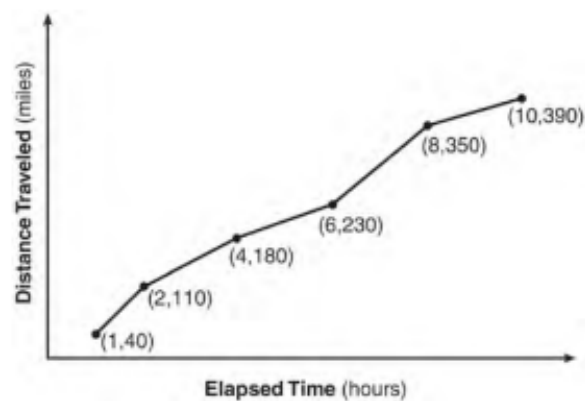
- 88 The graph below shows the distance in miles, m , hiked from a camp in h hours.



Which hourly interval had the greatest rate of change?

- 1) hour 0 to hour 1
- 2) hour 1 to hour 2
- 3) hour 2 to hour 3
- 4) hour 3 to hour 4

- 89 The Jamison family kept a log of the distance they traveled during a trip, as represented by the graph below.



During which interval was their average speed the greatest?

- 1) the first hour to the second hour
- 2) the second hour to the fourth hour
- 3) the sixth hour to the eighth hour
- 4) the eighth hour to the tenth hour

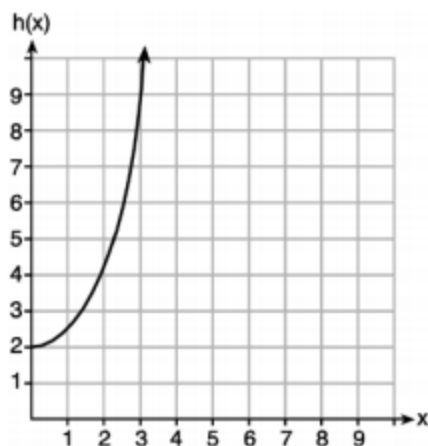
CFU_Think-Pair-Share

Loretta and her family are going on vacation. Their destination is 610 miles from their home. Loretta is going to share some of the driving with her dad. Her average speed while driving is 55 mph and her dad's average speed while driving is 65 mph. The plan is for Loretta to drive for the first 4 hours of the trip and her dad to drive for the remainder of the trip. Determine the number of hours it will take her family to reach their destination. After Loretta has been driving for 2 hours, she gets tired and asks her dad to take over. Determine, to the *nearest tenth of an hour*, how much time the family will save by having Loretta's dad drive for the remainder of the trip.

Given the functions $g(x)$, $f(x)$, and $h(x)$ shown below:

$$g(x) = x^2 - 2x$$

x	$f(x)$
0	1
1	2
2	5
3	7



The correct list of functions ordered from greatest to least by average rate of change over the interval $0 \leq x \leq 3$ is

- | | |
|-----------------------------|-----------------------------|
| 1) $f(x)$, $g(x)$, $h(x)$ | 3) $g(x)$, $f(x)$, $h(x)$ |
| 2) $h(x)$, $g(x)$, $f(x)$ | 4) $h(x)$, $f(x)$, $g(x)$ |

An astronaut drops a rock off the edge of a cliff on the Moon. The distance, $d(t)$, in meters, the rock travels after t seconds can be modeled by the function $d(t) = 0.8t^2$. What is the average speed, in meters per second, of the rock between 5 and 10 seconds after it was dropped?

- 1) 12
- 2) 20
- 3) 60
- 4) 80

The table below shows the average diameter of a pupil in a person’s eye as he or she grows older.

Age (years)	Average Pupil Diameter (mm)
20	4.7
30	4.3
40	3.9
50	3.5
60	3.1
70	2.7
80	2.3

What is the average rate of change, in millimeters per year, of a person’s pupil diameter from age 20 to age 80?

- 1) 2.4
- 2) 0.04
- 3) -2.4
- 4) -0.04

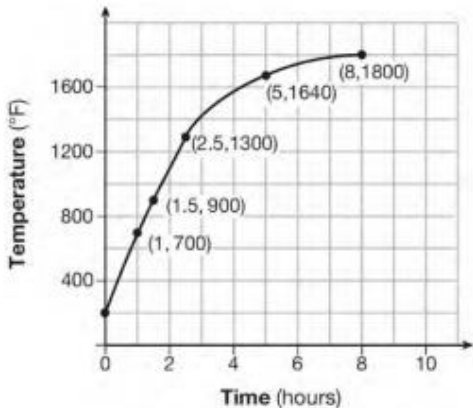
Joey enlarged a 3-inch by 5-inch photograph on a copy machine. He enlarged it four times. The table below shows the area of the photograph after each enlargement.

Enlargement	0	1	2	3	4
Area (square inches)	15	18.8	23.4	29.3	36.6

What is the average rate of change of the area from the original photograph to the fourth enlargement, to the nearest tenth?

- 1) 4.3
- 2) 4.5
- 3) 5.4
- 4) 6.0

Firing a piece of pottery in a kiln takes place at different temperatures for different amounts of time. The graph below shows the temperatures in a kiln while firing a piece of pottery after the kiln is preheated to 200°F.



During which time interval did the temperature in the kiln show the greatest average rate of change?

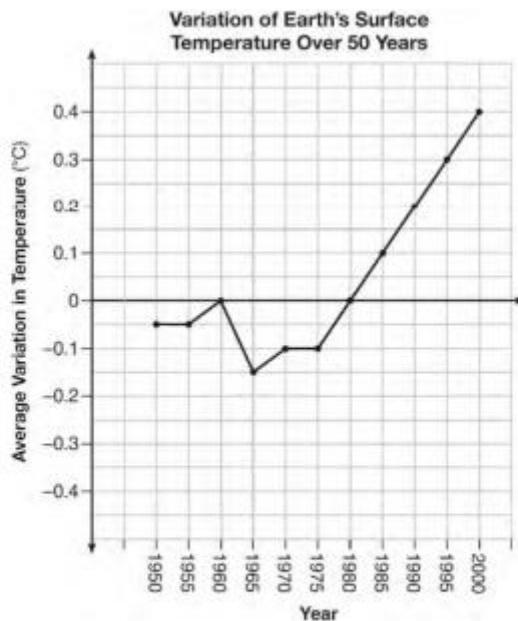
- 1) 0 to 1 hour
- 2) 1 hour to 1.5 hours
- 3) 2.5 hours to 5 hours
- 4) 5 hours to 8 hours

The table below shows the cost of mailing a postcard in different years. During which time interval did the cost increase at the greatest average rate?

Year	1898	1971	1985	2006	2012
Cost (£)	1	6	14	24	35

- 1) 1898-1971
- 2) 1971-1985
- 3) 1985-2006
- 4) 2006-2012

The graph below shows the variation in the average temperature of Earth's surface from 1950-2000, according to one source.



During which years did the temperature variation change the most per unit time? Explain how you determined your answer.

The table below shows the year and the number of households in a building that had high-speed broadband internet access.

Number of Households	11	16	23	33	42	47
Year	2002	2003	2004	2005	2006	2007

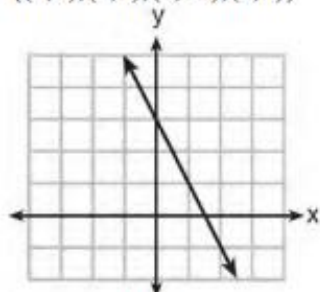
For which interval of time was the average rate of change the *smallest*?

- 1) 2002 - 2004
- 2) 2003 - 2005
- 3) 2004 - 2006
- 4) 2005 - 2007

- 96 Which function has a constant rate of change equal to -3 ?

x	y
0	2
1	5
2	8
3	11

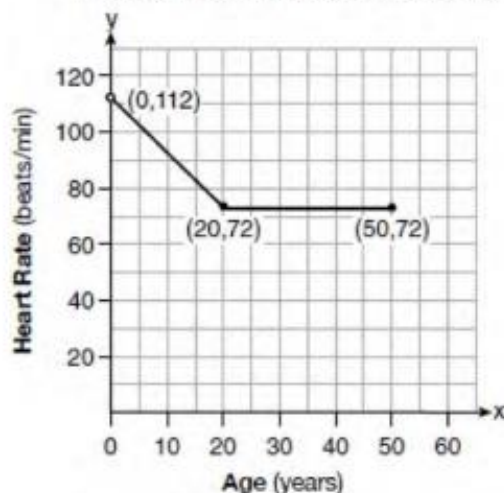
- 1)
2) $\{(1,5), (2,2), (3,-5), (4,4)\}$



- 3)
4) $2y = -6x + 10$

- 97 A graph of average resting heart rates is shown below. The average resting heart rate for adults is 72 beats per minute, but doctors consider resting rates from 60-100 beats per minute within normal range.

Average Resting Heart Rate by Age



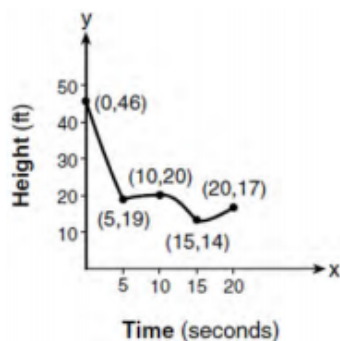
Which statement about average resting heart rates is *not* supported by the graph?

- 1) A 10-year-old has the same average resting heart rate as a 20-year-old.
 - 2) A 20-year-old has the same average resting heart rate as a 30-year-old.
 - 3) A 40-year-old may have the same average resting heart rate for ten years.
 - 4) The average resting heart rate for teenagers steadily decreases.
- 98 A family is traveling from their home to a vacation resort hotel. The table below shows their distance from home as a function of time.

Time (hrs)	0	2	5	7
Distance (mi)	0	140	375	480

Determine the average rate of change between hour 2 and hour 7, including units.

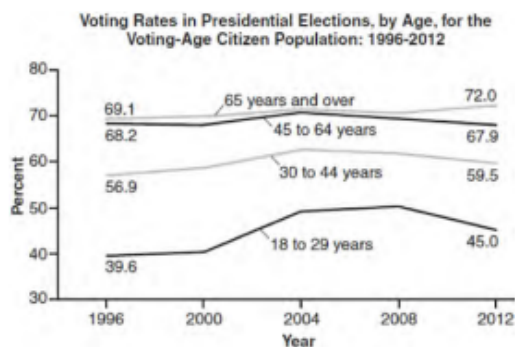
- 99 The graph below models the height of a remote-control helicopter over 20 seconds during flight.



Over which interval does the helicopter have the *slowest* average rate of change?

- 1) 0 to 5 seconds
- 2) 5 to 10 seconds
- 3) 10 to 15 seconds
- 4) 15 to 20 seconds

- 100 Voting rates in presidential elections from 1996-2012 are modeled below.



Which statement does *not* correctly interpret voting rates by age based on the given graph?

- 1) For citizens 18-29 years of age, the rate of change in voting rate was greatest between years 2000-2004.
- 2) From 1996-2012, the average rate of change was positive for only two age groups.
- 3) About 70% of people 45 and older voted in the 2004 election.
- 4) The voting rates of eligible age groups lies between 35 and 75 percent during presidential elections every 4 years from 1996-2012.

- 74 Using the formula for the volume of a cone, express r in terms of V , h , and π .

- 75 The formula $F_g = \frac{GM_1M_2}{r^2}$ calculates the gravitational force between two objects where G is the gravitational constant, M_1 is the mass of one object, M_2 is the mass of the other object, and r is the distance between them. Solve for the positive value of r in terms of F_g , G , M_1 , and M_2 .

N.Q.A.1: CONVERSIONS

- 76 Peyton is a sprinter who can run the 40-yard dash in 4.5 seconds. He converts his speed into miles per hour, as shown below.

$$\frac{40 \text{ yd}}{4.5 \text{ sec}} \cdot \frac{3 \text{ ft}}{1 \text{ yd}} \cdot \frac{5280 \text{ ft}}{1 \text{ mi}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}}$$

Which ratio is *incorrectly* written to convert his speed?

- 1) $\frac{3 \text{ ft}}{1 \text{ yd}}$
 - 2) $\frac{5280 \text{ ft}}{1 \text{ mi}}$
 - 3) $\frac{60 \text{ sec}}{1 \text{ min}}$
 - 4) $\frac{60 \text{ min}}{1 \text{ hr}}$
- 77 Dan took 12.5 seconds to run the 100-meter dash. He calculated the time to be approximately
- 1) 0.2083 minute
 - 2) 750 minutes
 - 3) 0.2083 hour
 - 4) 0.52083 hour
- 78 Faith wants to use the formula $C(f) = \frac{5}{9}(f - 32)$ to convert degrees Fahrenheit, f , to degrees Celsius, $C(f)$. If Faith calculated $C(68)$, what would her result be?
- 1) 20° Celsius
 - 2) 20° Fahrenheit
 - 3) 154° Celsius
 - 4) 154° Fahrenheit
- 79 A typical marathon is 26.2 miles. Allan averages 12 kilometers per hour when running in marathons. Determine how long it would take Allan to complete a marathon, to the *nearest tenth of an hour*. Justify your answer.
- 80 A construction worker needs to move 120 ft³ of dirt by using a wheelbarrow. One wheelbarrow load holds 8 ft³ of dirt and each load takes him 10 minutes to complete. One correct way to figure out the number of hours he would need to complete this job is
- 1) $\frac{120 \text{ ft}^3}{1} \cdot \frac{10 \text{ min}}{1 \text{ load}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{1 \text{ load}}{8 \text{ ft}^3}$
 - 2) $\frac{120 \text{ ft}^3}{1} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{8 \text{ ft}^3}{10 \text{ min}} \cdot \frac{1}{1 \text{ load}}$
 - 3) $\frac{120 \text{ ft}^3}{1} \cdot \frac{1 \text{ load}}{10 \text{ min}} \cdot \frac{8 \text{ ft}^3}{1 \text{ load}} \cdot \frac{1 \text{ hr}}{60 \text{ min}}$
 - 4) $\frac{120 \text{ ft}^3}{1} \cdot \frac{1 \text{ load}}{8 \text{ ft}^3} \cdot \frac{10 \text{ min}}{1 \text{ load}} \cdot \frac{1 \text{ hr}}{60 \text{ min}}$

Name: _____

Date: _____

Extra Practice (04)

Solve each of the following equations. Make sure to get the equation to have only one term with the variable, then write out the list of operations happening to the variable.

1. $\frac{x}{3} + \frac{x}{4} = 7$

LCD:

2. $4(3x - 5) - x = -x + 16$

3. $5x - (x + 3) = 7 + 2(x + 2)$

4. $\frac{2x}{5} - \frac{x-1}{4} = 1$ LCD:

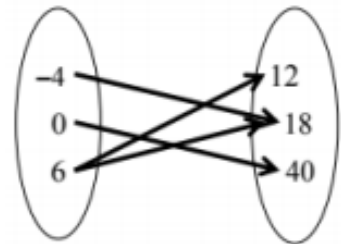
5. Subtract $6y^2 - 7y + 3$ from $4y^2 + y - 8$.

6. Answer the following using the mapping diagram shown.

a) Domain:

b) Range:

c) Is this relation a function? Why or why not?



7. The function $k(x)$ is shown. Use the graph to answer the following:

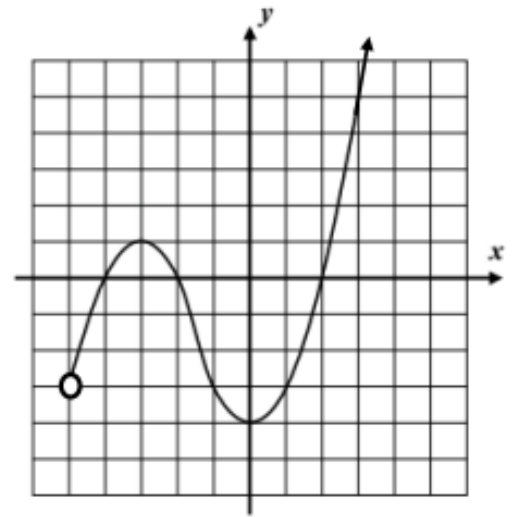
a) Domain:

b) Range:

c) $k(-1) =$

d) If $k(x) = 5$, find x .

e) Over what interval(s) is $k(x)$ increasing?



Solve the equation for x.

1) $3x - 5 = 13$

2) $3x + 7 = 5x - 11$

3) $5 = 3 - (4 - 2x)$

4) $\frac{x+1}{3} = \frac{7x+2}{4}$

5) Solve for f : $7a - 3d + 6f = 5$

6) Solve for g: $4gh + 3 = -8$

7) Solve for k: $4k + 5a - 3 = 10 - 2k$

8) Solve for q: $4(q + 3) - 5u = p + 7$

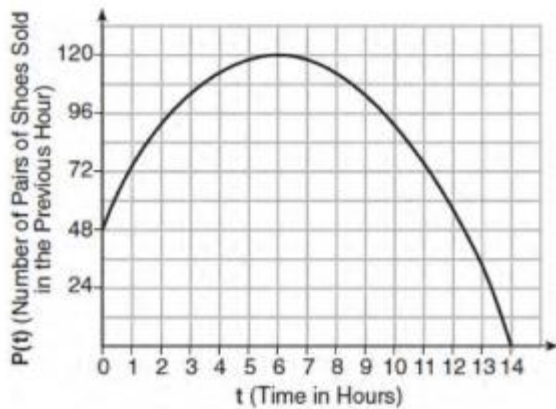
Name: _____

Date: _____

04_ Rate of Change

Exit Ticket

- 1 A manager wanted to analyze the online shoe sales for his business. He collected data for the number of pairs of shoes sold each hour over a 14-hour time period. He created a graph to model the data, as shown below.



The manager believes the set of integers would be the most appropriate domain for this model. Explain why he is *incorrect*. State the entire interval for which the number of pairs of shoes sold is increasing. Determine the average rate of change between the sixth and fourteenth hours, and explain what it means in the context of the problem.

Name: _____

Date: _____

05_ Equations and Inequalities

Try Now_

Caitlin has a movie rental card worth \$175. After she rents the first movie, the card's value is \$172.25. After she rents the second movie, its value is \$169.50. After she rents the third movie, the card is worth \$166.75. Assuming the pattern continues, write an equation to define $A(n)$, the amount of money on the rental card after n rentals. Caitlin rents a movie every Friday night. How many weeks in a row can she afford to rent a movie, using her rental card only? Explain how you arrived at your answer.

In 2013, the United States Postal Service charged \$0.46 to mail a letter weighing up to 1 oz. and \$0.20 per ounce for each additional ounce. Which function would determine the cost, in dollars, $c(z)$, of mailing a letter weighing z ounces where z is an integer greater than 1?

- 1) $c(z) = 0.46z + 0.20$
- 2) $c(z) = 0.20z + 0.46$
- 3) $c(z) = 0.46(z - 1) + 0.20$
- 4) $c(z) = 0.20(z - 1) + 0.46$

Model #1

Alex is selling tickets to a school play. An adult ticket costs \$6.50 and a student ticket costs \$4.00. Alex sells x adult tickets and 12 student tickets. Write a function, $f(x)$, to represent how much money Alex collected from selling tickets.

Model #2

Jackson is starting an exercise program. The first day he will spend 30 minutes on a treadmill. He will increase his time on the treadmill by 2 minutes each day. Write an equation for $T(d)$, the time, in minutes, on the treadmill on day d . Find $T(6)$, the minutes he will spend on the treadmill on day 6.

CFU_Think-Pair-Share

Last weekend, Emma sold lemonade at a yard sale. The function $P(c) = .50c - 9.96$ represented the profit, $P(c)$, Emma earned selling c cups of lemonade. Sales were strong, so she raised the price for this weekend by 25 cents per cup. Which function represents her profit for this weekend?

- 1) $P(c) = .25c - 9.96$
- 2) $P(c) = .50c - 9.71$
- 3) $P(c) = .50c - 10.21$
- 4) $P(c) = .75c - 9.96$

Jim is a furniture salesman. His weekly pay is \$300 plus 3.5% of his total sales for the week. Jim sells x dollars' worth of furniture during the week. Write a function, $p(x)$, which can be used to determine his pay for the week. Use this function to determine Jim's pay to the *nearest cent* for a week when his sales total is \$8250.

Model # 3

- 109 Each day Toni records the height of a plant for her science lab. Her data are shown in the table below.

Day (n)	1	2	3	4	5
Height (cm)	3.0	4.5	6.0	7.5	9.0

The plant continues to grow at a constant daily rate. Write an equation to represent $h(n)$, the height of the plant on the n th day.

CFU_ Think-Pair-Share

- 110 Tanya is making homemade greeting cards. The data table below represents the amount she spends in dollars, $f(x)$, in terms of the number of cards she makes, x .

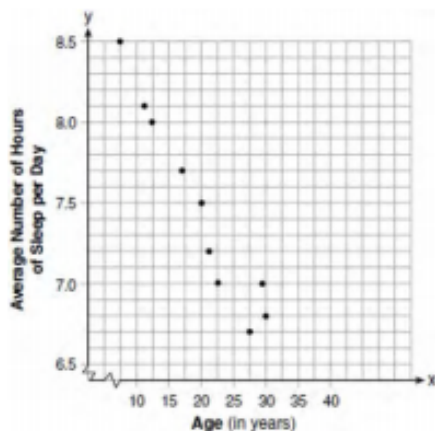
x	$f(x)$
4	7.50
6	9
9	11.25
10	12

Write a linear function, $f(x)$, that represents the data. Explain what the slope and y -intercept of $f(x)$ mean in the given context.

- 111 A company that manufactures radios first pays a start-up cost, and then spends a certain amount of money to manufacture each radio. If the cost of manufacturing r radios is given by the function $c(r) = 5.25r + 125$, then the value 5.25 best represents
- 1) the start-up cost
 - 2) the profit earned from the sale of one radio
 - 3) the amount spent to manufacture each radio
 - 4) the average number of radios manufactured
- 112 A satellite television company charges a one-time installation fee and a monthly service charge. The total cost is modeled by the function $y = 40 + 90x$. Which statement represents the meaning of each part of the function?
- 1) y is the total cost, x is the number of months of service, \$90 is the installation fee, and \$40 is the service charge per month.
 - 2) y is the total cost, x is the number of months of service, \$40 is the installation fee, and \$90 is the service charge per month.
 - 3) x is the total cost, y is the number of months of service, \$40 is the installation fee, and \$90 is the service charge per month.
 - 4) x is the total cost, y is the number of months of service, \$90 is the installation fee, and \$40 is the service charge per month.

Independent Practice

- 113 The owner of a small computer repair business has one employee, who is paid an hourly rate of \$22. The owner estimates his weekly profit using the function $P(x) = 8600 - 22x$. In this function, x represents the number of
- 1) computers repaired per week
 - 2) hours worked per week
 - 3) customers served per week
 - 4) days worked per week
- 114 The cost of airing a commercial on television is modeled by the function $C(n) = 110n + 900$, where n is the number of times the commercial is aired. Based on this model, which statement is true?
- 1) The commercial costs \$0 to produce and \$110 per airing up to \$900.
 - 2) The commercial costs \$110 to produce and \$900 each time it is aired.
 - 3) The commercial costs \$900 to produce and \$110 each time it is aired.
 - 4) The commercial costs \$1010 to produce and can air an unlimited number of times.
- 115 The cost of belonging to a gym can be modeled by $C(m) = 50m + 79.50$, where $C(m)$ is the total cost for m months of membership. State the meaning of the slope and y -intercept of this function with respect to the costs associated with the gym membership.
- 116 A car leaves Albany, NY, and travels west toward Buffalo, NY. The equation $D = 280 - 59t$ can be used to represent the distance, D , from Buffalo after t hours. In this equation, the 59 represents the
- 1) car's distance from Albany
 - 2) speed of the car
 - 3) distance between Buffalo and Albany
 - 4) number of hours driving
- 117 A plumber has a set fee for a house call and charges by the hour for repairs. The total cost of her services can be modeled by $c(t) = 125t + 95$. Which statements about this function are true?
- I. A house call fee costs \$95.
 - II. The plumber charges \$125 per hour.
 - III. The number of hours the job takes is represented by t .
- 1) I and II, only
 - 2) I and III, only
 - 3) II and III, only
 - 4) I, II, and III
- 118 A student plotted the data from a sleep study as shown in the graph below.



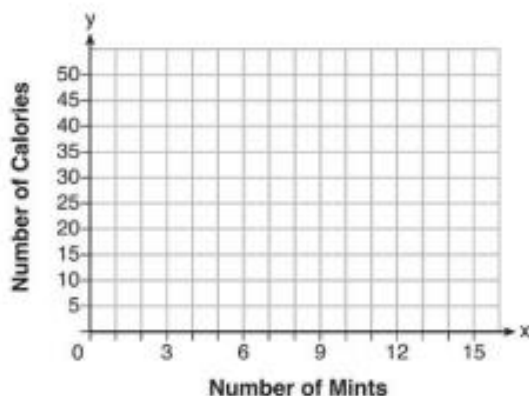
The student used the equation of the line $y = -0.09x + 9.24$ to model the data. What does the rate of change represent in terms of these data?

- 1) The average number of hours of sleep per day increases 0.09 hour per year of age.
- 2) The average number of hours of sleep per day decreases 0.09 hour per year of age.
- 3) The average number of hours of sleep per day increases 9.24 hours per year of age.
- 4) The average number of hours of sleep per day decreases 9.24 hours per year of age.

- 119 During a recent snowstorm in Red Hook, NY, Jaime noted that there were 4 inches of snow on the ground at 3:00 p.m., and there were 6 inches of snow on the ground at 7:00 p.m. If she were to graph these data, what does the slope of the line connecting these two points represent in the context of this problem?

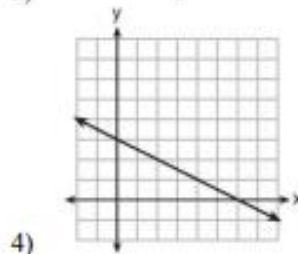
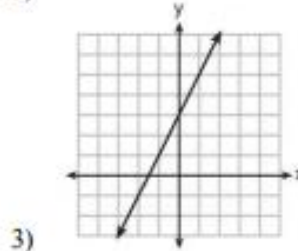
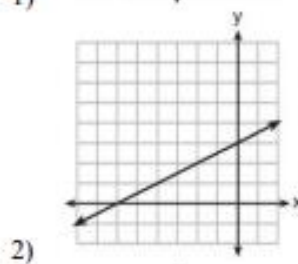
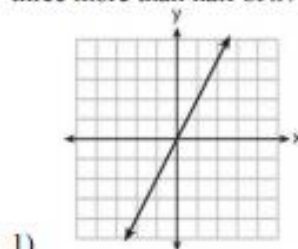
A.CED.A.2, F.IF.B.4: GRAPHING LINEAR FUNCTIONS

- 120 Max purchased a box of green tea mints. The nutrition label on the box stated that a serving of three mints contains a total of 10 Calories. On the axes below, graph the function, C , where $C(x)$ represents the number of Calories in x mints.



Write an equation that represents $C(x)$. A full box of mints contains 180 Calories. Use the equation to determine the total number of mints in the box.

- 121 Which graph shows a line where each value of y is three more than half of x ?



Inequality: The relation between two expression that are not equal. Instead they will be one of four different things:

- Greater than ($>$)
- Greater than or equal to (\geq)
- Less than ($<$)
- Less than or equal to (\leq)

Solving inequalities are just like solving equations except for one rule:

When multiplying or dividing by a negative, _____ the inequality sign.

All other rules of solving still apply:

- Get rid of fractions right away by multiplying by the LCD.
- Rover, rover, bring the smaller x over.
- Make a list of all the things happening to the variable you are solving for, then do the opposite from the bottom of the list to the top.

Example: Solve the inequality below.

$$-x + 6 > -(3x + 4)$$

Example # 2

Solve and graph the inequality. Then write the solution set using interval notation.

$$-\frac{2}{3}x + 1 \geq 15$$

CFU_Think-Pair-Share

Solve and graph the following. Express the solutions in interval notation.

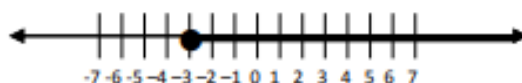
1. $-\frac{3}{7}(x-4) > 15$

2. $4(2-x) \leq -2x$

3. Solve the inequality $-2x-4 < 8$. State the smallest integer value that makes this inequality true.

4. Describe and correct the error in the problem below.

$$\begin{array}{l} -15x > 45 \\ \frac{-15x}{-15} > \frac{45}{-15} \\ x > -3 \end{array}$$



5. John has four more nickels than dimes in his pocket, for a total of \$1.25. Which equation could be used to determine the number of dimes, x , in his pocket?

(1) $0.10(x + 4) + 0.05(x) = 1.25$

(2) $0.05(x + 4) + 0.10(x) = 1.25$

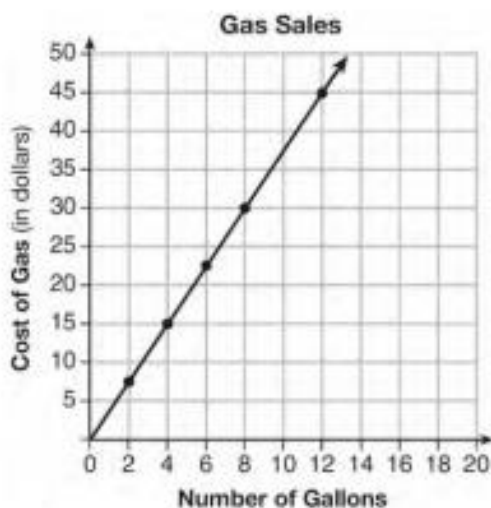
(3) $0.10(4x) + 0.05(x) = 1.25$

(4) $0.05(4x) + 0.10(x) = 1.25$

6. Simplify with your answer using only positive exponents: $\frac{36c^{-6}d^3e}{54c^3d^{-5}e^7}$

7. Simplify: $(a + 3)(a^4 - 5a - 7)$

- 122 The graph below was created by an employee at a gas station.



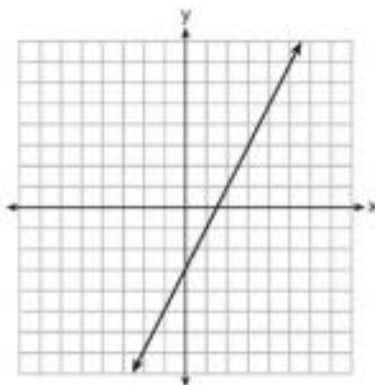
Which statement can be justified by using the graph?

- 1) If 10 gallons of gas was purchased, \$35 was paid.
- 2) For every gallon of gas purchased, \$3.75 was paid.
- 3) For every 2 gallons of gas purchased, \$5.00 was paid.
- 4) If zero gallons of gas were purchased, zero miles were driven.

- 123 The value of the x -intercept for the graph of $4x - 5y = 40$ is

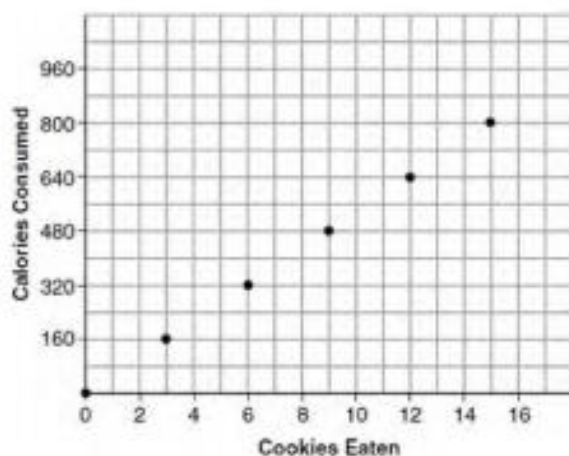
- 1) 10
- 2) $\frac{4}{5}$
- 3) $-\frac{4}{5}$
- 4) -8

- 124 Which function has the same y -intercept as the graph below?



- 1) $y = \frac{12 - 6x}{4}$
- 2) $27 + 3y = 6x$
- 3) $6y + x = 18$
- 4) $y + 3 = 6x$

- 125 Samantha purchases a package of sugar cookies. The nutrition label states that each serving size of 3 cookies contains 160 Calories. Samantha creates the graph below showing the number of cookies eaten and the number of Calories consumed.



Explain why it is appropriate for Samantha to draw a line through the points on the graph.

A.REI.D.10: WRITING LINEAR EQUATIONS

- 126 The graph of a linear equation contains the points (3, 11) and (-2, 1). Which point also lies on the graph?
- 1) (2, 1)
 - 2) (2, 4)
 - 3) (2, 6)
 - 4) (2, 9)
- 127 Sue and Kathy were doing their algebra homework. They were asked to write the equation of the line that passes through the points (-3, 4) and (6, 1). Sue wrote $y - 4 = -\frac{1}{3}(x + 3)$ and Kathy wrote $y = -\frac{1}{3}x + 3$. Justify why both students are correct.
- 128 How many of the equations listed below represent the line passing through the points (2, 3) and (4, -7)?

$$5x + y = 13$$

$$y + 7 = -5(x - 4)$$

$$y = -5x + 13$$

$$y - 7 = 5(x - 4)$$

- 1) 1
- 2) 2
- 3) 3
- 4) 4

INEQUALITIES

A.REI.B.3: SOLVING LINEAR INEQUALITIES

- 129 The inequality $7 - \frac{2}{3}x < x - 8$ is equivalent to
- 1) $x > 9$
 - 2) $x > -\frac{3}{5}$
 - 3) $x < 9$
 - 4) $x < -\frac{3}{5}$
- 130 Given that $a > b$, solve for x in terms of a and b :
 $b(x - 3) \geq ax + 7b$
- 131 When $3x + 2 \leq 5(x - 4)$ is solved for x , the solution is
- 1) $x \leq 3$
 - 2) $x \geq 3$
 - 3) $x \leq -11$
 - 4) $x \geq 11$
- 132 What is the solution to $2h + 8 > 3h - 6$
- 1) $h < 14$
 - 2) $h < \frac{14}{5}$
 - 3) $h > 14$
 - 4) $h > \frac{14}{5}$
- 133 Solve the inequality below:
 $1.8 - 0.4y \geq 2.2 - 2y$

- 134 What is the solution to the inequality

$$2 + \frac{4}{9}x \geq 4 + x?$$

- 1) $x \leq -\frac{18}{5}$
- 2) $x \geq -\frac{18}{5}$
- 3) $x \leq \frac{54}{5}$
- 4) $x \geq \frac{54}{5}$

A.REI.B.3: INTERPRETING SOLUTIONS

- 135 Given $2x + ax - 7 > -12$, determine the largest integer value of a when $x = -1$.

- 136 Solve the inequality below to determine and state the smallest possible value for x in the solution set.

$$3(x + 3) \leq 5x - 3$$

- 137 Determine the smallest integer that makes $-3x + 7 - 5x < 15$ true.

- 138 Solve for x algebraically:

$$7x - 3(4x - 8) \leq 6x + 12 - 9x$$

If x is a number in the interval $[4, 8]$, state all integers that satisfy the given inequality. Explain how you determined these values.

Name: _____

Date: _____

05_ Equations and Inequalities

Exit Ticket

139 Which value would be a solution for x in the inequality $47 - 4x < 7$?

- 1) -13
- 2) -10
- 3) 10
- 4) 11

140 Given the set $\{x | -2 \leq x \leq 2, \text{ where } x \text{ is an integer}\}$, what is the solution of $-2(x - 5) < 10$?

- 1) 0, 1, 2
- 2) 1, 2
- 3) -2, -1, 0
- 4) -2, -1

Name: _____

Date: _____

05_ Equations and Inequalities

Exit Ticket

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- 1) -13
- 2) -10
- 3) 10
- 4) 11

140 Given the set $\{x | -2 \leq x \leq 2, \text{ where } x \text{ is an integer}\}$, what is the solution of $-2(x - 5) < 10$?

- 1) 0, 1, 2
- 2) 1, 2
- 3) -2, -1, 0
- 4) -2, -1

Name: _____

Date: _____

06_ Inequalities and Graphing

Try Now_

Connor wants to attend the town carnival. The price of admission to the carnival is \$4.50, and each ride costs an additional 79 cents. If he can spend at most \$16.00 at the carnival, which inequality can be used to solve for r , the number of rides Connor can go on, and what is the maximum number of rides he can go on?

- 1) $0.79 + 4.50r \leq 16.00$; 3 rides
- 2) $0.79 + 4.50r \leq 16.00$; 4 rides
- 3) $4.50 + 0.79r \leq 16.00$; 14 rides
- 4) $4.50 + 0.79r \leq 16.00$; 15 rides

Model #1

Less Than <	Less than or Equal \leq	Greater Than >	Greater than or Equal \geq
Is less than Fewer than Shorter than Smaller than	At most Maximum Is no more than	Is more than Greater than Longer than Larger than	At least Minimum Is no less than

1. Use the picture shown. A gas station discounts gas \$0.10 per gallon, if a customer also purchases a \$6.00 car wash. What is a possible amount (in whole gallons) of gasoline that you can buy if you also get a car wash and can spend at most \$20.00?



2. Joel is saving money for a summer camp that costs \$1800. He has already saved \$600. He has 15 more weeks to save the remaining balance. What is the least amount of money that Joel has to save per week to be able to attend summer camp?

Model #2

3. Samantha needs to have at least \$100 in her checking account to avoid a low balance fee. Samantha has \$247 in her account, and she makes withdrawals of \$20 per week. At most how many weeks can Samantha withdraw money and avoid paying a fee?

4. Nancy sells her handmade scarves at the yearly craft show. She has to pay \$50 to set up her booth at the craft show. The cost for making all her scarves was \$168. She sold 15 scarves at \$20 each.

a) Did she make a profit? Set up an inequality to prove.

b) What is the fewest number of scarves that she can sell to have a profit? Set up an inequality to solve.

1. Pencils sell for \$0.19 each. Terry cannot spend more than the \$1.50 in his pocket. How many pencils can Terry buy?
2. The length of a rectangle is 15 and its width is w . The perimeter of the rectangle is, at most, 50. Which inequality can be used to find the longest possible width?

(1) $2w + 30 < 50$	(3) $2w + 30 > 50$
(2) $2w + 30 \leq 50$	(4) $2w + 30 \geq 50$
3. As a waiter at a restaurant, Joe earns \$2.25 an hour plus tips. If he made \$55 in tips and his total earnings did not exceed \$70, how many full hours could he have worked?
4. An elevator can hold no more than 2,000 pounds. If a 350 – pound package is placed in the elevator, how many people, averaging 150 pounds each, can safely get into the elevator?

5. As part of his fitness plan, Paul wants to consume no more than 2,900 calories per day. So far today, he has consumed 460 calories. If he wants to consume exactly 380 calories per meal, how many more meals is he allowed to have today?

6. In a math class, two students were asked to go to the board to simplify the following expression.

$$15 - 3[2 + 6(-3)]$$

Student A

$$\begin{aligned}15 - 3[2 + 6(-3)] \\15 - 3[2 - 18] \\15 - 3[-16] \\12[-16] \\-192\end{aligned}$$

Student B

$$\begin{aligned}15 - 3[2 + 6(-3)] \\15 - 3[2 - 18] \\15 - 3[-16] \\15 + 48 \\63\end{aligned}$$

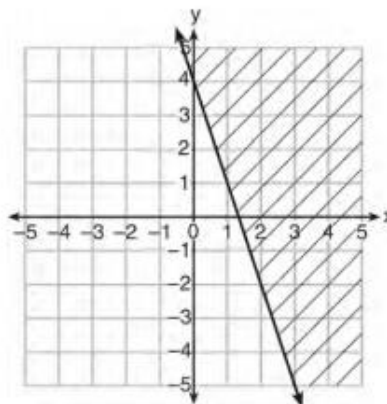
Which student arrived at an incorrect answer? Explain your reasoning.

7. Solve for b_1 in terms of A , h , and b_2 .

$$A = \frac{1}{2}h(b_1 + b_2)$$

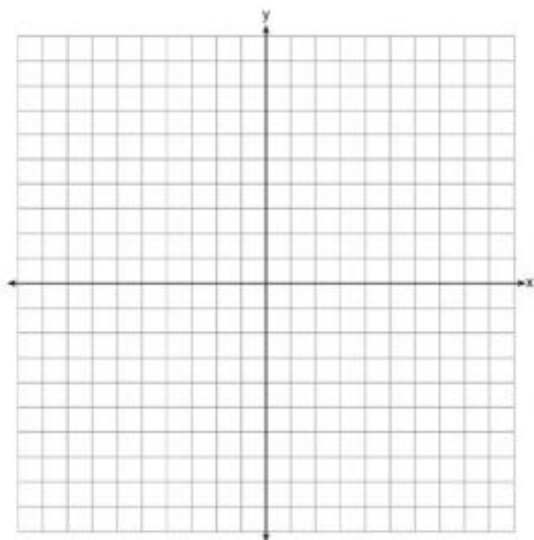
Regent Question

- 142 Natasha is planning a school celebration and wants to have live music and food for everyone who attends. She has found a band that will charge her \$750 and a caterer who will provide snacks and drinks for \$2.25 per person. If her goal is to keep the average cost per person between \$2.75 and \$3.25, how many people, p , must attend?
- $225 < p < 325$
 - $325 < p < 750$
 - $500 < p < 1000$
 - $750 < p < 1500$
- 143 The cost of a pack of chewing gum in a vending machine is \$0.75. The cost of a bottle of juice in the same machine is \$1.25. Julia has \$22.00 to spend on chewing gum and bottles of juice for her team and she must buy seven packs of chewing gum. If b represents the number of bottles of juice, which inequality represents the maximum number of bottles she can buy?
- $0.75b + 1.25(7) \geq 22$
 - $0.75b + 1.25(7) \leq 22$
 - $0.75(7) + 1.25b \geq 22$
 - $0.75(7) + 1.25b \leq 22$
- 144 The acidity in a swimming pool is considered normal if the average of three pH readings, p , is defined such that $7.0 < p < 7.8$. If the first two readings are 7.2 and 7.6, which value for the third reading will result in an overall rating of normal?
- 6.2
 - 7.3
 - 8.6
 - 8.8
- 145 David has two jobs. He earns \$8 per hour babysitting his neighbor's children and he earns \$11 per hour working at the coffee shop. Write an inequality to represent the number of hours, x , babysitting and the number of hours, y , working at the coffee shop that David will need to work to earn a minimum of \$200. David worked 15 hours at the coffee shop. Use the inequality to find the number of full hours he must babysit to reach his goal of \$200.
- A.REI.D.12: GRAPHING LINEAR INEQUALITIES
- 146 Which inequality is represented in the graph below?

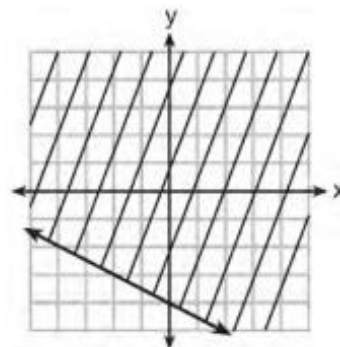


- $y \geq -3x + 4$
 - $y \leq -3x + 4$
 - $y \geq -4x - 3$
 - $y \leq -4x - 3$
-

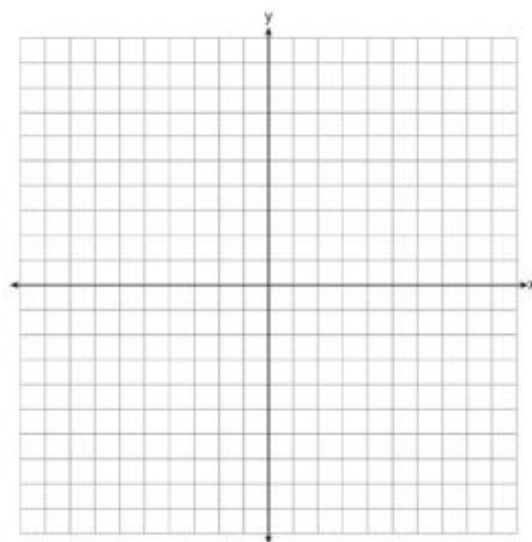
- 147 On the set of axes below, graph the inequality $2x + y > 1$.



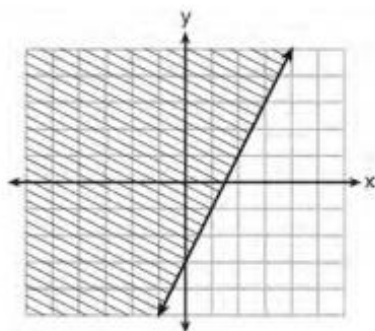
- 149 Shawn incorrectly graphed the inequality $-x - 2y \geq 8$ as shown below.



Explain Shawn's mistake. Graph the inequality correctly on the set of axes below.

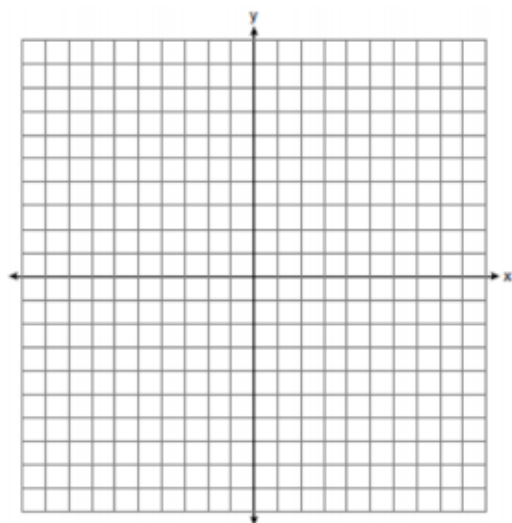


- 148 Which inequality is represented by the graph below?

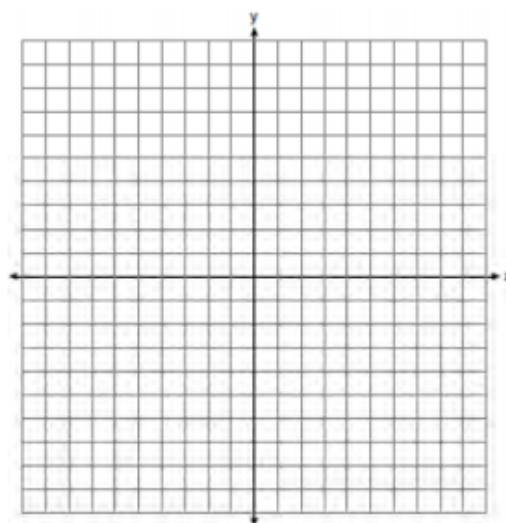


- 1) $y \leq 2x - 3$
- 2) $y \geq 2x - 3$
- 3) $y \leq -3x + 2$
- 4) $y \geq -3x + 2$

- 150 Graph the inequality $y > 2x - 5$ on the set of axes below. State the coordinates of a point in its solution.



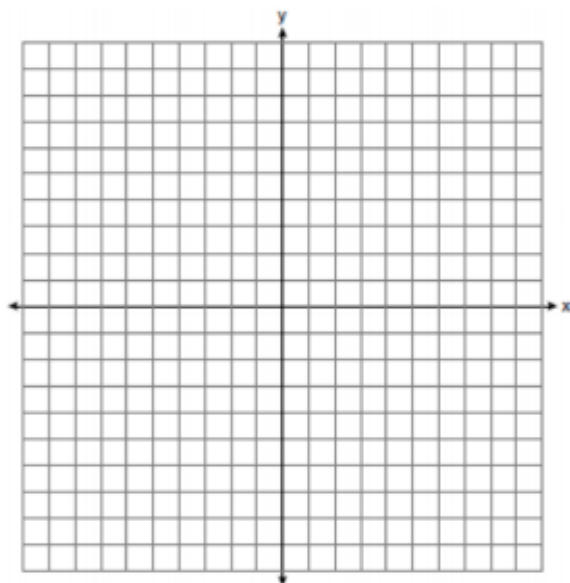
- 151 Graph the inequality $y + 4 < -2(x - 4)$ on the set of axes below.



ABSOLUTE VALUE

F.IF.C.7, F.BF.B.3: GRAPHING ABSOLUTE VALUE FUNCTIONS

- 152 On the set of axes below, graph the function $y = |x + 1|$.

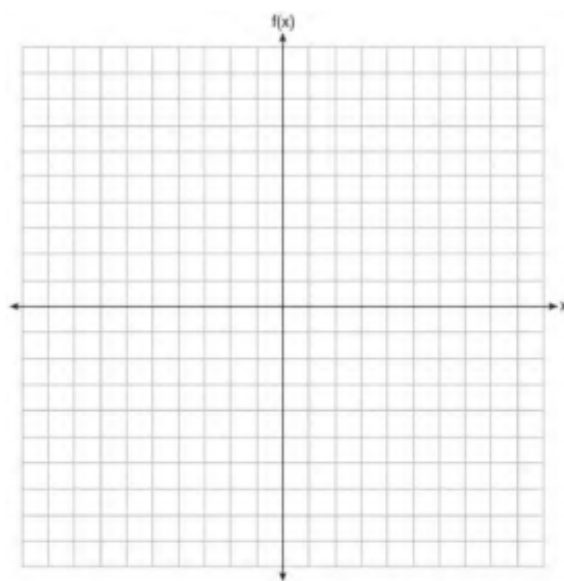


State the range of the function. State the domain over which the function is increasing.

- 153 What is the *minimum* value of the function $y = |x + 3| - 2$?

- 1) -2
- 2) 2
- 3) 3
- 4) -3

- 154 On the set of axes below, graph $f(x) = |x - 3| + 2$.

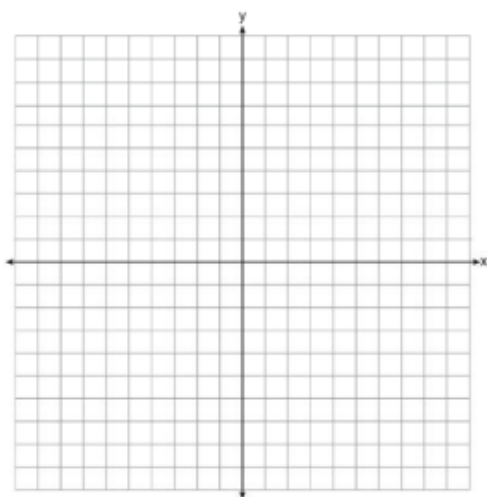


- 155 Describe the effect that each transformation below has on the function $f(x) = |x|$, where $a > 0$.

$$g(x) = |x - a|$$

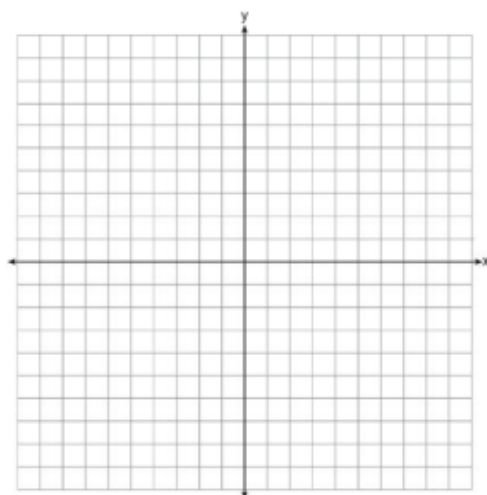
$$h(x) = |x| - a$$

- 156 On the axes below, graph $f(x) = |3x|$.



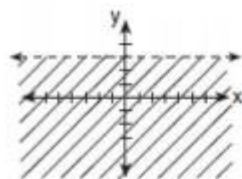
If $g(x) = f(x) - 2$, how is the graph of $f(x)$ translated to form the graph of $g(x)$? If $h(x) = f(x - 4)$, how is the graph of $f(x)$ translated to form the graph of $h(x)$?

- 157 Graph the function $y = |x - 3|$ on the set of axes below.



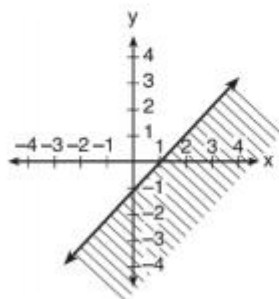
Explain how the graph of $y = |x - 3|$ has changed from the related graph $y = |x|$.

- 1 Which inequality is represented by the accompanying graph?



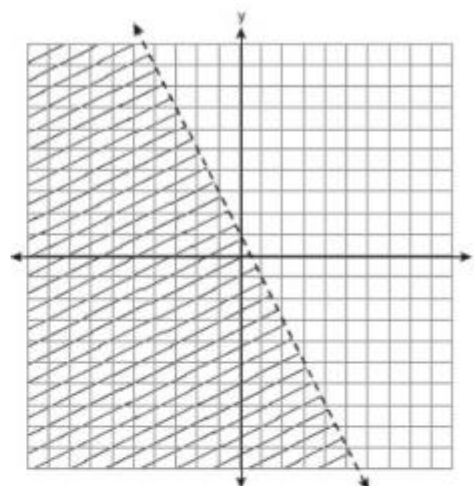
- 1) $y < 3$
- 2) $y > 3$
- 3) $y \leq 3$
- 4) $y \geq 3$

- 2 The diagram below shows the graph of which inequality?



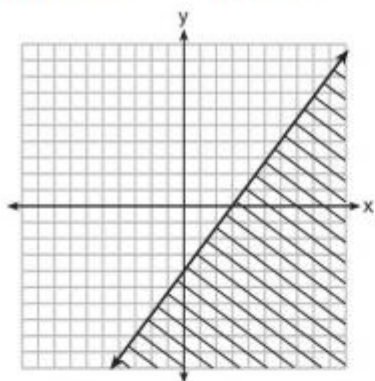
- 1) $y > x - 1$
- 2) $y \geq x - 1$
- 3) $y < x - 1$
- 4) $y \leq x - 1$

- 3 Which inequality is represented by the graph below?



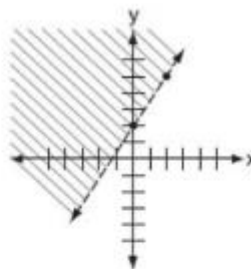
- 1) $y < 2x + 1$
- 2) $y < -2x + 1$
- 3) $y < \frac{1}{2}x + 1$
- 4) $y < -\frac{1}{2}x + 1$

4 Which inequality is shown in the graph below?



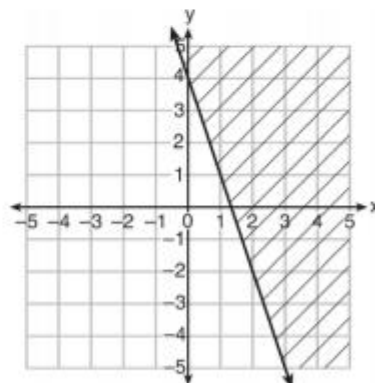
- 1) $y \leq \frac{4}{3}x + 3$
- 2) $y \geq \frac{4}{3}x + 3$
- 3) $y \leq \frac{4}{3}x - 4$
- 4) $y \geq \frac{4}{3}x - 4$

5 Which inequality is shown in the accompanying diagram?



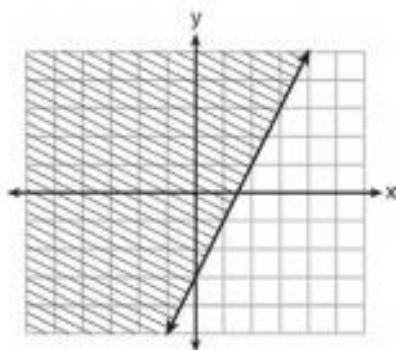
- 1) $y > \frac{3}{2}x + 2$
- 2) $y < \frac{3}{2}x + 2$
- 3) $y \geq \frac{3}{2}x + 2$
- 4) $y \leq \frac{3}{2}x + 2$

6 Which inequality is represented in the graph below?



- 1) $y \geq -3x + 4$
 - 2) $y \leq -3x + 4$
 - 3) $y \geq -4x - 3$
 - 4) $y \leq -4x - 3$
-

- 7 Which inequality is represented by the graph below?



- 1) $y \leq 2x - 3$
- 2) $y \geq 2x - 3$
- 3) $y \leq -3x + 2$
- 4) $y \geq -3x + 2$

- 8 In the graph of $y \leq -x$, which quadrant is completely shaded?

- 1) I
- 2) II
- 3) III
- 4) IV

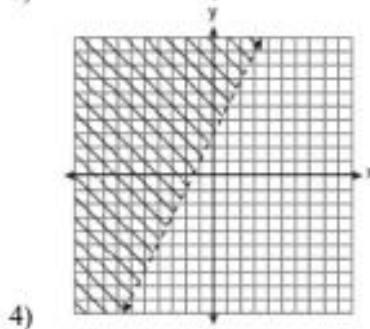
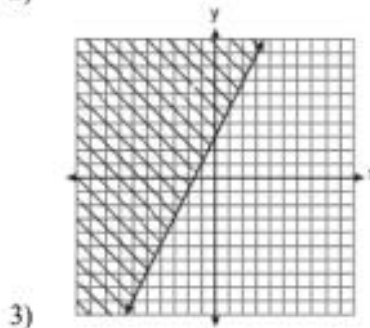
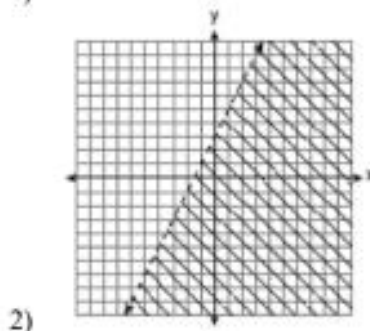
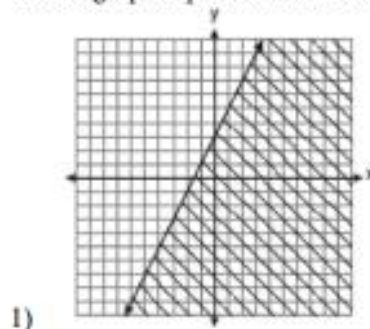
- 9 Which quadrant will be completely shaded in the graph of the inequality $y \leq 2x$?

- 1) Quadrant I
- 2) Quadrant II
- 3) Quadrant III
- 4) Quadrant IV

- 10 Which ordered pair is *not* in the solution set of $y > 2x + 1$?

- 1) (1,4)
- 2) (1,6)
- 3) (3,8)
- 4) (2,5)

- 11 Which graph represents the solution of $3y - 9 \leq 6x$?



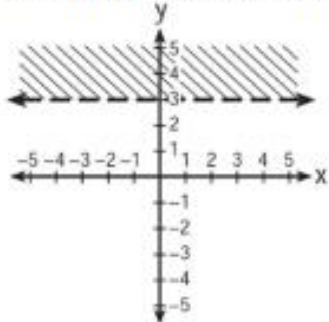
Name: _____

Date: _____

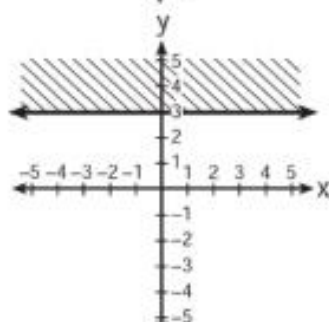
06_ Inequalities and Graphing

Exit Ticket

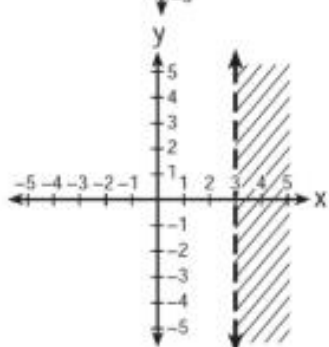
12 Which graph represents the inequality $y > 3$?



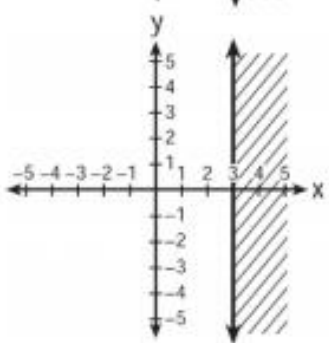
1)



2)

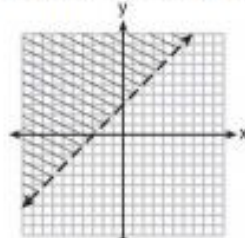


3)

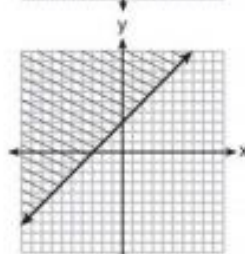


4)

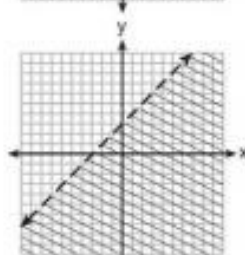
13 Which graph represents the inequality $y \geq x + 3$?



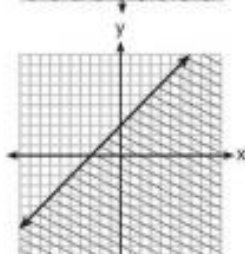
1)



2)



3)



4)