\*\*NOTE: NONE OF THIS IS REQUIRED AND IS JUST A GUIDE TO HELP DURING THIS TOUGH TIME. FEEL FREE TO CONTACT MRS. DAY (rday@pioneercsd.org) or MRS. BOCKHAHN (kbockhhan@pioneercsd.org) WITH ANY QUESTIONS/CONCERNS

#### PRACTICE WEBSITES

- ixl.com
  - username is first initial followed by last name and then @pioneer password should be panther example: kbockhahn@pioneer
  - SUGGESTED SECTIONS INCLUDE
    - C19, H10, H15, K2, K6, DD1, CC1, BB16, T6, T7, S6, R8, R14
    - FOR AP, UNDER 8th GRADE: F10, F6, G1, G3, G4, BB6, BB7, BB8
- https://login.i-ready.com/
  - o username is first initial followed by last initial and their student id password is "green" and the last three of their school id

#### **VIDEOS**

- mathantics.com
  - once on this site, you can look around and find videos on "ORDER OF OPERATIONS," "THE DISTRIBUTIVE PROPERTY IN ARITHMETIC," "RATIOS & RATES," "PROPORTIONS," "PERIMETER," "AREA," "CIRCLES: WHAT IS PI?," "CIRCLES:CIRCUMFERENCE & AREA," "MEAN, MEDIAN & MODE," "BASIC PROBABILITY," "NEGATIVE NUMBERS," "ADDING & SUBTRACTING INTEGERS," "MULTIPLYING & DIVIDING INTEGERS," "ABOLUTE VALUE," "WHAT IS ALGEBRA?," "SOLVING BASIC EQUATIONS PT. 1," SOLVING BASIC EQUATIONS PT. 2," "SOLVING 2-STEP EQUATIONS," "WHAT ARE POLYNOMIALS?," "SIMPLIFYING POLYNOMIALS," "THE DISTRIBUTIVE PROPERTY"

#### WORKSHEETS IN THE NEXT PAGES

- the worksheets are just guiding pages for review and ARE NOT required to be done
  - o the worksheets can be done and then checked via the answer keys

Determine the constant of proportionality(k) for each table and write the proportional relationship between  $\boldsymbol{x}$  and  $\boldsymbol{y}$ .

1)

x	10	20	35	45
y	4	8	14	18

2)

x	9	4	2	11
y	63	28	14	77

3)

x	2	3	8	10
у	8	12	32	40

4)

x	14	21	28	35
у	12	18	24	30

5)

x	72	45	36	18
y	32	20	16	8

6)

x	5	7	9	12
у	40	56	72	96

7)

х	4	7	9	14
y	12	21	27	42

	ж	24	28	12	16
ĺ	y	6	7	3	4

x	10	20	35	45
у	4	8	14	18

2)

x	9	4	2	11
у	63	28	14	77

$$k = \frac{2}{5}$$
;  $y = \frac{2}{5}x$ 

k = 7 ; y = 7x

3)

x	2	3	8	10
у	8	12	32	40

4)

x	14	21	28	35
у	12	18	24	30

$$k = 4 ; y = 4x$$

 $k = \frac{6}{7}$ ;  $y = \frac{6}{7}x$ 

5)

x	72	45	36	18
у	32	20	16	8

6)

х	5	7	9	12
у	40	56	72	96

$$k = \frac{4}{9}$$
;  $y = \frac{4}{9}x$ 

k=8; y=8x

7)

x	4	7	9	14
y	12	21	27	42

$$k = 3 ; y = 3x$$

$$k = \frac{1}{4}$$
;  $y = \frac{1}{4}x$ 

The values of  $\boldsymbol{x}$  and  $\boldsymbol{y}$  are proportional. Determine the constant of proportionality(k) and find the missing values.

2)

4)

1)	x	9		5	
	у	36	16		8

,	r		6	15	9
7	V	4	2		

3)	x	12		30	48
	у		3		8

x			4	
у	25	40	20	60

5)	x	7	11	4	
	у			32	24

6)	x		14		
	у	21	6	15	3

7)	x		5		30
	у	14		6	12

x	3	4		7
у	18	5:	54	5:

х	9	4	5	2
у	36	16	20	8

2)

x	12	6	15	9
у	4	2	5	3

k = 4

 $k = \frac{1}{3}$ 

3)

x	12	18	30	48
у	2	3	5	8

4)

х	5	8	4	12
у	25	40	20	60

 $k = \frac{1}{6}$ 

5)

х	7	11	4	3
у	56	88	32	24

6)

x	49	14	35	7
у	21	6	15	3

k = 8

	3	
k =	_	
•	7	

7)

x	35	5	15	30
у	14	2	6	12

x	3	4	9	7
у	18	24	54	42

$$k = \frac{2}{5}$$

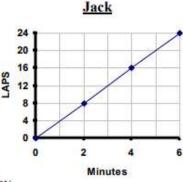
**Directions**: Liam, Nathan, Lucas, and Jack wanted to get in shape for the upcoming basketball season. They decided to run laps around the gym and record the results. Each of the boys tried to keep a steady pace during the laps, but not everyone was able to maintain the same speed throughout the training. The results of their training are listed below.

<u>Liam</u>				
Minutes	Laps			
1	2			
2	4			
3	6			
4	8			
5	10			

Minutes	Laps
2	3.5
4	7
6	10.5
8	14
10	17.5

Nathan

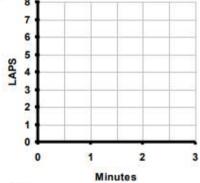




- 1) Which of the boy(s) above has results that are not proportional? Explain why.
- For the boys whose results are proportional, find the constant of proportionality between their laps and minutes.
- 3) Imagine that you are the fifth participant in the drill. You ran the laps at a rate that was 1 lap per minute slower than Jack. Complete the table below to show your results at this slower rate.

Minutes	Laps
0.5	
1	
1.5	
2	
5.5	

4) On the graph below, plot data points that show a constant of proportionality of 2.5 between the number of laps and the minutes.



•				
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Minute

1

Laps		
2		
4		
6		
8		

10

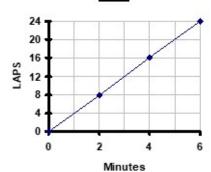
TA.T		41			
- 174	а	T	n	Э	n
4.3	-			-	

Minutes	Laps
2	3.5
4	7
6	10.5
8	14
10	17.5

Lucas

Minutes	Laps
1	3
2	6
3	8
4	10
5	11

Jack



1) Which of the boy(s) above has results that are not proportional? Explain why. (1 point)

Lucas' results are not proportional. He began at a pace of 3 laps/minute and began to slow down.

2) For the boys whose results are proportional, find the constant of proportionality between their laps and minutes. (3 point)

Liam: 2 laps/minute

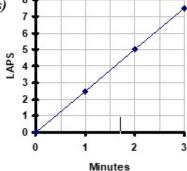
Nathan: 1.75 laps/minute

Jack: 4 laps/minute

3) Imagine that you are the fifth participant in the drill. You ran the laps at a rate that was 1 lap per minute slower than Jack. Complete the table below to show your results at this slower rate. (3 points)

Minutes	Laps
0.5	1.5
1	3
1.5	4.5
2	6
5.5	16.5

4) On the graph below, plot data points that show a constant of proportionality of 2.5 between the number of laps and the minutes. (3 points) 8 T



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$$8 + 10 =$$

$$10 + 9 =$$

$$2 - 5 =$$

$$7 + (-8) =$$

$$16 \div (-4) =$$

$$9 - (-11) =$$

$$7 + 6 =$$

$$8 \times (-10) =$$

$$4 - (-6) =$$

$$(-3) + 11 =$$

$$(-2) + 5 =$$

$$20 \div (-2) =$$

$$(-8) \times 4 =$$

$$(-9) \times 6 =$$

$$(-1) \times (-10) =$$

$$3 + (-11) =$$

$$1 \times (-7) =$$

$$1 - (-9) =$$

$$(-8) \times (-4) =$$

$$(-7) \times (-3) =$$

$$8 + (-2) =$$

$$35 \div 5 =$$

$$7 - 6 =$$

$$5 - (-3) =$$

$$(-7) - 7 =$$

$$9 - 8 =$$

$$3 - (-6) =$$

$$2 \times 8 =$$

$$4 - 10 =$$

$$(-11) + 4 =$$

7 + (-8) = (-1)

 $16 \div (-4) = (-4)$ 

9 - (-11) = 20

7 + 6 = 13

 $8 \times (-10) = (-80)$ 

4 - (-6) = 10

(-3) + 11 = 8

(-2) + 5 = 3

 $20 \div (-2) = (-10)$ 

 $(-8) \times 4 = (-32)$ 

 $(-9) \times 6 = (-54)$ 

 $(-1) \times (-10) = 10$ 

3 + (-11) = (-8)

 $1 \times (-7) = (-7)$ 

1 - (-9) = 10

 $(-8) \times (-4) = 32$ 

 $(-7) \times (-3) = 21$ 

8 + (-2) = 6

 $35 \div 5 = 7$ 

7 - 6 = 1

5 - (-3) = 8

(-7) - 7 = (-14)

9 - 8 = 1

3 - (-6) = 9

 $2 \times 8 = 16$ 

4 - 10 = (-6)

(-11) + 4 = (-7)

ANSWER KEY

$$(-9) \times 2 =$$

$$(-12) + (-9) =$$

$$(-9) + 12 =$$

$$(-2)$$
 -  $(-8)$  =

$$4 \times 7 =$$

$$11 \times 8 =$$

$$6 - (-4) =$$

$$9 - 10 =$$

$$5 - (-10) =$$

$$6 \times 3 =$$

$$(-12) - (-1) =$$

$$2 - (-7) =$$

$$(-72) \div 6 =$$

$$(-9) \div (-3) =$$

$$9 - 2 =$$

$$9 - (-5) =$$

$$(-108) \div (-9) =$$

$$(-4) \times (-8) =$$

$$20 \div (-4) =$$

$$7 - 10 =$$

$$8 \times 4 =$$

$$(-6)$$
 -  $(-11)$  =

$$27 \div 9 =$$

$$11 + 1 =$$

$$9 - 10 =$$

$$10 - 2 =$$

$$1 + 3 =$$

$$(-6) \times 11 =$$

$$(-1) \times 6 =$$

$$4 - 11 =$$

$$(-9) \times 2 = (-18)$$
  $(-12) + (-9) = (-21)$   $(-9) + 12 = 3$ 

$$(-9) + 12 = 3$$

(-2) - (-8) = 6

 $4 \times 7 = 28$ 

 $11 \times 8 = 88$ 

6 - (-4) = 10

9 - 10 = (-1)

5 - (-10) = 15

 $6 \times 3 = 18$ 

(-12) - (-1) = (-11)

2 - (-7) = 9

 $(-72) \div 6 = (-12)$   $(-9) \div (-3) = 3$ 

9 - 2 = 7

9 - (-5) = 14

 $(-108) \div (-9) = 12$   $(-4) \times (-8) = 32$ 

 $20 \div (-4) = (-5)$ 

7 - 10 = (-3)

 $8 \times 4 = 32$ 

(-6) - (-11) = 5

 $27 \div 9 = 3$ 

11 + 1 = 12

9 - 10 = (-1)

10 - 2 = 8

1 + 3 = 4

 $(-6) \times 11 = (-66)$   $(-1) \times 6 = (-6)$ 

4 - 11 = (-7)

$$4 + (-5) =$$

$$9 \div (-1) =$$

$$2 \times (-9) =$$

$$110 \div (-11) =$$

$$3 + 1 =$$

$$3 - 10 =$$

$$(-3) + (-3) =$$

$$(-7) + 5 =$$

$$(-10) + 1 =$$

$$9 \times (-6) =$$

$$30 \div (-5) =$$

$$80 \div 8 =$$

$$4 + 1 =$$

$$6 - 2 =$$

$$2 + 1 =$$

$$4 \times (-6) =$$

$$(-11) + (-4) =$$

$$(-9) + (-10) =$$

$$(-4) \div (-1) =$$

$$(-7) \times 5 =$$

$$10 + (-8) =$$

$$5 + 12 =$$

$$8 \div 2 =$$

$$5 + 5 =$$

$$(-5) + 4 =$$

$$110 \div 10 =$$

$$9 \times (-11) =$$

$$(-40) \div 8 =$$

$$(-11) - (-5) =$$

$$8 \times 12 =$$

$$9 \div (-1) = (-9)$$

$$2 \times (-9) = (-18)$$

$$110 \div (-11) = (-10)$$
  $3 + 1 = 4$ 

$$3 + 1 = 4$$

$$3 - 10 = (-7)$$

$$(-3) + (-3) = (-6)$$

$$(-7) + 5 = (-2)$$

$$(-10) + 1 = (-9)$$

$$9 \times (-6) = (-54)$$

$$30 \div (-5) = (-6)$$

$$80 \div 8 = 10$$

$$4 + 1 = 5$$

$$6 - 2 = 4$$

$$2 + 1 = 3$$

$$4 \times (-6) = (-24)$$

$$(-11) + (-4) = (-15)$$

$$(-9) + (-10) = (-19)$$

$$(-4) \div (-1) = 4$$

$$(-7) \times 5 = (-35)$$

$$10 + (-8) = 2$$

$$5 + 12 = 17$$

$$8 \div 2 = 4$$

$$5 + 5 = 10$$

$$(-5) + 4 = (-1)$$

$$110 \div 10 = 11$$

$$9 \times (-11) = (-99)$$

$$(-40) \div 8 = (-5)$$

$$(-11) - (-5) = (-6)$$
  $8 \times 12 = 96$ 

$$8 \times 12 = 96$$

$$7 \times 9 =$$

$$(-11) + (-1) = 8 \times (-2) =$$

$$8 \times (-2) =$$

$$(-2) \times 10 =$$

$$80 \div 10 =$$

$$1 \times 12 =$$

$$5 + (-10) =$$

$$(-88) \div 8 =$$

$$4 + (-1) =$$

$$5 - 4 =$$

$$36 \div (-9) =$$

$$8 \times (-5) =$$

$$10 \div (-1) =$$

$$8 \times 4 =$$

$$25 \div 5 =$$

$$6 + 6 =$$

$$1 + (-1) =$$

$$96 \div 8 =$$

$$(-4) - (-9) =$$

$$(-11) \times (-11) =$$

$$(-108) \div 12 =$$

$$(-3) \times 8 =$$

$$(-7) \times 3 =$$

$$(-7) \times (-5) =$$

$$(-7)$$
 -  $(-6)$  =

$$1 - (-5) =$$

$$(-9) + 7 =$$

$$9 - (-1) =$$

$$3 + 6 =$$

 $(-2) \times 10 = (-20)$ 

 $80 \div 10 = 8$ 

 $1 \times 12 = 12$ 

5 + (-10) = (-5)

 $(-88) \div 8 = (-11)$  4 + (-1) = 3

5 - 4 = 1

 $36 \div (-9) = (-4)$ 

 $8 \times (-5) = (-40)$ 

 $10 \div (-1) = (-10)$ 

 $8 \times 4 = 32$ 

 $25 \div 5 = 5$ 

6 + 6 = 12

1 + (-1) = 0

 $96 \div 8 = 12$ 

(-4) - (-9) = 5

 $(-11) \times (-11) = 121$   $(-108) \div 12 = (-9)$ 

 $(-3) \times 8 = (-24)$ 

 $(-7) \times 3 = (-21)$ 

 $(-7) \times (-5) = 35$ 

(-7) - (-6) = (-1)

1 - (-5) = 6

(-9) + 7 = (-2)

9 - (-1) = 10

3 - 11 = (-8)

3 + 6 = 9

### Simplify each expression.

1) 
$$(8q^2 + 5q^5) + (9q^5 - 4q^2)$$

6) 
$$(9 - 7z^4) - (5z^4 + 3)$$

2) 
$$(7 - 6d^2 - 2d^4) + (8d + 3d^4 - 9)$$

7) 
$$(2q + 9q^4 - 3) + (7q + 4q^4 - 5q^2)$$

3) 
$$(9z^4 - 7z^3) + (3z^3 - 8z + 4z^4)$$

8) 
$$(4g - 5 + 9g^3) + (8g^3 - 3 - 2g^5)$$

4) 
$$(9b^4 + 8 - 5b^2) + (b - 7b^2 + 3)$$

9) 
$$(8x^2 + 7) - (9x^2 + 4 - x^3)$$

1) 
$$(8q^2 + 5q^5) + (9q^5 - 4q^2)$$
  
 $14q^5 + 4q^2$ 

6) 
$$(9 - 7z^4) - (5z^4 + 3)$$
  
-  $12z^4 + 6$ 

2) 
$$(7 - 6d^2 - 2d^4) + (8d + 3d^4 - 9)$$
  
 $d^4 - 6d^2 + 8d - 2$ 

7) 
$$(2q + 9q^4 - 3) + (7q + 4q^4 - 5q^2)$$
  
 $13q^4 - 5q^2 + 9q - 3$ 

3) 
$$(9z^4 - 7z^3) + (3z^3 - 8z + 4z^4)$$
  
 $13z^4 - 4z^3 - 8z$ 

8) 
$$(4g - 5 + 9g^3) + (8g^3 - 3 - 2g^5)$$
  
-  $2g^5 + 17g^3 + 4g - 8$ 

4) 
$$(9b^4 + 8 - 5b^2) + (b - 7b^2 + 3)$$
  
 $9b^4 - 12b^2 + b + 11$ 

9) 
$$(8x^2 + 7) - (9x^2 + 4 - x^3)$$
  
 $x^3 - x^2 + 3$ 

5) 
$$(7r + 2r^2) + (9r^2 - 8r)$$
  
 $11r^2 - r$ 

10) 
$$(9h^2 - 7h^5) + (6h^5 - 4)$$
  
-  $h^2 + 9h^5 - 4$ 

Round your answers to the nearest hundredth.

6) 
$$-5 = \frac{y}{7}$$

$$2) - 13 = 6 + k$$

7) 
$$x-7 = -11$$

$$3)$$
  $55 = 5 n$ 

$$8)-10 = b+6$$

4) 
$$\frac{s}{3} = 10$$

9) 
$$r + 4 = 5$$

10) 
$$9 = 7 + z$$



6) 
$$-5 = \frac{y}{7}$$
  
  $y = -35$ 

2) - 13 = 
$$6 + k$$
  
 $k = -19$ 

7) 
$$x-7 = -11$$
  
 $x = -4$ 

# ANSWER KEY

8)- 
$$10 = b + 6$$
  
 $b = -16$ 

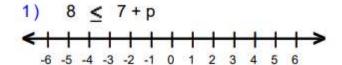
4) 
$$\frac{s}{3} = 10$$
  
 $s = 30$ 

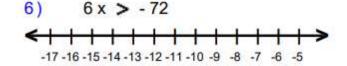
10) 
$$9 = 7 + z$$
 $z = 2$ 

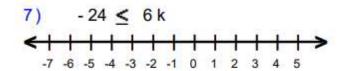


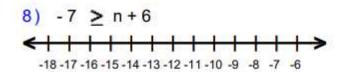


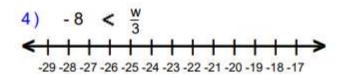
## Solve and Graph the Inequalities

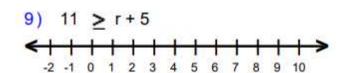


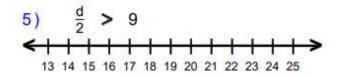


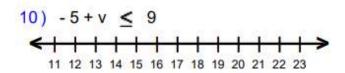








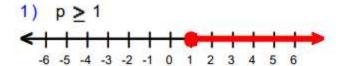




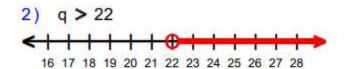


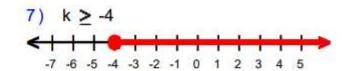


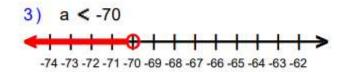
# Solve and Graph the Inequalities

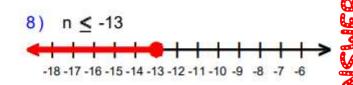




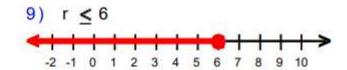




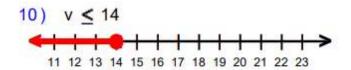
















# Solve the Equations

Round your answers to the nearest hundredth if needed.

6) 
$$\frac{h-12}{-3} = 11$$

2) 
$$\frac{12-f}{16} = -10$$

7) 
$$\frac{25-r}{-23} = -2$$

3) 
$$27 + \frac{2}{3}x = 23$$

8) 
$$\frac{b+16}{-26} = -14$$

4) 
$$\frac{6}{7}$$
 c - 17 = -25

9) 
$$\frac{z+14}{17} = 29$$

5) 
$$\frac{2+n}{25} = 20$$

10) 
$$\frac{d-10}{2} = -19$$



6) 
$$\frac{h-12}{-3} = 11$$
  
h = -21.00

2) 
$$\frac{12-f}{16} = -10$$
  
f = 172.00

7) 
$$\frac{25-r}{-23} = -2$$
  
r = -21.00

3) 
$$27 + \frac{2}{3}x = 23$$
  
  $x = -6.00$ 

8) 
$$\frac{b+16}{-26} = -14$$
  
b = 348.00

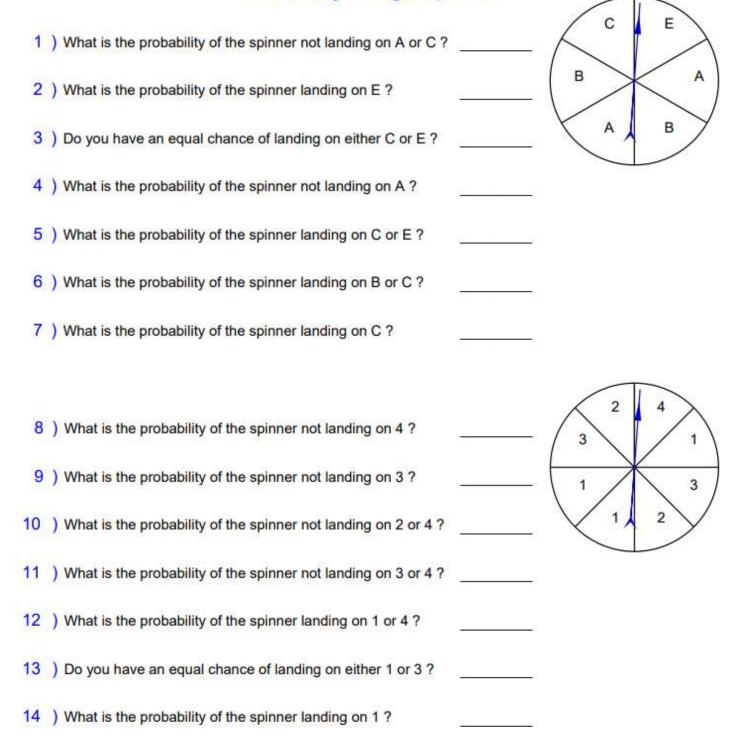
4) 
$$\frac{6}{7}$$
 c - 17 = -25  
c = -9.33

9) 
$$\frac{z+14}{17} = 29$$
  
 $z = 479.00$ 

5) 
$$\frac{2+n}{25} = 20$$
  
n = 498.00

10) 
$$\frac{d-10}{2} = -19$$
  
d = -28.00

## **Probability Using a Spinner**



## **Probability Using a Spinner**

1 ) What is the probability of the spinner not landing on A or C? 3 out of 6

2 ) What is the probability of the spinner landing on E? 1 out of 6

3 ) Do you have an equal chance of landing on either C or E? Yes

4 ) What is the probability of the spinner not landing on A? 4 out of 6

5 ) What is the probability of the spinner landing on C or E? 2 out of 6

6 ) What is the probability of the spinner landing on B or C? 3 out of 6

7 ) What is the probability of the spinner landing on C? 1 out of 6

8 ) What is the probability of the spinner not landing on 4? 7 out of 8

9 ) What is the probability of the spinner not landing on 3? 6 out of 8

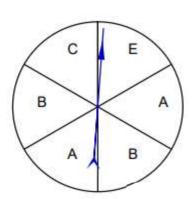
10 ) What is the probability of the spinner not landing on 2 or 4? 5 out of 8

11 ) What is the probability of the spinner not landing on 3 or 4? 5 out of 8

12 ) What is the probability of the spinner landing on 1 or 4? 4 out of 8

13 ) Do you have an equal chance of landing on either 1 or 3?

14 ) What is the probability of the spinner landing on 1? 3 out of 8



ANSWER KEY

