1.95

## "Ratio and Proportions, Expressions and Equations, & Number System Unit Test"

1. Which relationships have the same constant of proportionality between y and x as in the equation  $y = \frac{1}{6}x$ ? (CIRCLE CORRECT CHOICE)

	1 3.7	1.6	0	-1.5	X
y -4.5 0 4.8 29.1	29.1	4.8	0	-4.5	Y

x	-4.8	-2.4	1.8	3.0	
У	-0.8	-0.4	0.3	0.5	

0

X	-5.4	-2.7	1.5	2.4
У	-1.8	-0.9	0.5	0.8

2. Which expression is equivalent to  $-\frac{1}{2}(6x + 18) - 3$ ?

-2.05

$$a) -3x + 12$$

c) 
$$-3x - 12$$

1.6

b) 
$$-3x + 2$$

d) 
$$-3x - 8$$

3. Gatrude needs at most 90 signatures from scholars in her school before she can run for class president. She has 23 signatures already. She and three of her friends plan to get the remaining signatures during lunch. If each person gets the same number of signatures, which inequality can Gatrude use to determine the minimum number of signatures each person should get so she can run for class president?

a) 
$$4x + 90 \ge 23$$

c) 
$$4x + 23 \ge 90$$

b) 
$$4x + 90 \le 23$$

d) 
$$4x + 23 \le 90$$

4. Itiah needs a total of 52	6 forks for this resta	urant. She currently	has 378 forks. If each set ha	as 12
forks, what is the minimur	n number of sets of f	forks she should buy	?	
A. 13	C. 12			
D 44	9000 M/C MINDS			
B. 11	D. 148			
5. The length, I, of a rectang least 36 inches.	gle is 6.5 inches great	er than its width, w	The perimeter of the recta	ngle is at
Which inequality sh	nows the range of po	ssible widths of the	rectangle?	
•	0-11-1-1	orano manis or the	rectangle:	
A. w ≥ 6.5 inches	D			
A. w ≥ 6.5 inches	B. w ≥ 8 inches	C. w ≥ 9 inches	D. $w \ge 7$ inches	
		•		
6. Olivia joined a video renta she rents.	al club. She paid an in	itiation fee of \$21.2	5, and it cost \$1.85 per video	o that
Part A: If Olivia rents	4 movies how much	monov will ab a second	Fe 4 00 42	
	Timovics, now much	money will she pay	in total?	
A				
Answer				
Part B: Write an equa	tion to show the tota	l amount Olivia paid	to rent v videos.	
Equation				
		n Olivia naid a total	of \$237.70. How many video	
she rent? Show your w	ork.	o, Olivia paid a total	of \$237.70. How many video	s did
American				
Answer	videos			

Part D: Suppose Olivia had rented the same number of videos with the same initiation fee, but the cost was instead \$1.35 per video that she rented. What would she have paid in total? Show your work.

Answer		
WIIZAACI		

7. Given a rectangular room, Jaden wants to paint the walls. The dimensions of the wall are 39.5 feet by 27.5 feet. If the total amount for the paint is \$791.12, what is the cost per square foot?

2	
Answer	
MIISWEI	

8. What is the value of the expression  $-\left(-\frac{5}{9}\right) \div \left(-\frac{2}{9}\right) x \left(-1\frac{1}{4}\right)$ ?

9. A group of friends met at the playground to race one another. At the starting point Nicolas and Solomon walked in opposite directions to mark the area that they would use to run the race. Nicolas walked east 350 feet and Solomon walked west 405 feet.

Part A: Draw a number line and plot Nicolas and Solomon's ending location. Consider the starting point to be O, west to be the negative direction and east to be the positive direction

art B: How far apart are Nicolas and Solomon at their ending locations?
nswer
ort C: Write two different expressions that you could use to find the distance between
colas and Solomon.

10. Isaiah painted  $\frac{3}{8}$  of a wall using  $\frac{2}{3}$  of a can of paint. Which statement are true?

a) He can paint 8 walls with  $4\frac{1}{8}$  cans of paint

Expression 2

- b) He can paint 5 walls with  $2\frac{2}{3}$  cans of paint
- c) He can paint 4 walls with  $2\frac{1}{4}$  can of paint
- d) He can paint 2 walls with  $1\frac{1}{3}$  can of paint