Part 2

1. What is the slope of the line that passes through $M(-6, 1)$ and $N(2, 5)$?

A. 2

B. $\frac{1}{2}$

C. $-\frac{1}{2}$

D. –2

2. What is the result when the expression $(6x - 3)$ is subtracted from $(-3x + 2)$?

F. $9x - 5$

G. $-9x + 5$

H. $3x - 1$

J. $-3x + 1$

3. Which relation is *not* a function?

A.

x	–2	0	2	4	6
y	3	3	3	3	3

B.

x	–3	0	2	–3	1
y	–5	4	2	0	–1

C.

x	1	2	3	4	5
y	1	2	3	4	5

D.

x	–4	1	2	–3	4
y	0	3	–1	–2	3

4. SHORT ANSWER Carla and Mandy are solving the inequality below.

$$-4x \geq 12$$

Carla says the solution is $x \leq -3$, while Mandy says the solution is $x \geq -3$. Which student is correct? What mistake was made by the other student?

5. A moving company charges $40 plus $0.25 per mile to rent a van. Another moving company charges $25 plus $0.35 per mile to rent the same type of van. For what number of miles will the rental cost be the same for both companies?

F. 150 miles

G. 180 miles

H. 260 miles

J. 650 miles

6. Which of the following expressions cannot be factored?

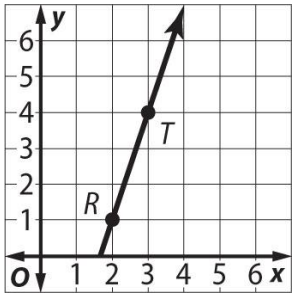
A. $15x - 10$

B. $4x + 8$

C. $3x + 8$

D. $2x - 2$

7. SHORT ANSWER What is the slope of the line that passes through points R and T ?



8. What is the constant rate of change of the function represented in the table?

x	y
–5	23
–1	7
3	–9
7	–25

F. 16

G. 4

H. –4

J. –16

9. Which system of linear equations has a solution of (–2, 1)?

A. $2x + 3y = -1$
$x - y = -3$

B. $2x + 3y = 1$
$x - y = 3$

C. $2x + 3y = -1$
$x - y = 3$

D. $2x + 3y = 1$
$x - y = -3$

10. A tank contains 550 gallons of water. When the valve is opened, the tank drains at a rate of 12 gallons per minute. Which function shows the relationship between the time t the valve is opened and the amount of water in the tank?

F. $A(t) = -12t + 550$

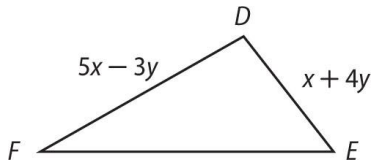
G. $A(t) = 12t + 550$

H. $A(t) = 12 + 550t$

J. $A(t) = -12 + 550t$

11. SHORT ANSWER If $f(x) = -2x - 1$ and $g(x) = -x$ what is the value of $f[g(2)]$?

12. The perimeter of ΔDEF is $12x + 3y$. What is the measure of the third side of the triangle?



A. $6x + 2y$

B. $6x + y$

C. $18x + 4y$

D. $18x + 10y$

13. What are the x- and y-intercepts of the linear equation below?

$$6x - 2y = 12$$

F. (2, 0) and (0, –6)

G. (0, 2) and (–6, 0)

H. (–6, 0) and (2, 0)

J. (0, 2) and (0, –6)

14. Which operation should be performed first to solve the inequality below?

$$-3x + 5 \leq 23$$

A. Add 5 to each side.

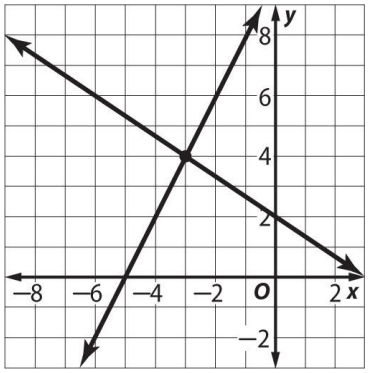
B. Divide each side by –3.

C. Reverse the inequality symbol.

D. Subtract 5 from each side.

15. SHORT ANSWER Predict what happens to the graph of $y = -2x - 8$ when the slope is changed to 2.

16. What is the solution to the system of linear equations shown below?



F. (4, –3)

G. (–4, 3)

H. (–3, 4)

J. (3, –4)

17. Which expression is equivalent to the algebraic expression below?

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

A. $-x - 1$

B. $-7x + 9$

C. $-12x + 20$

D. $-12x - 20$

18. Melissa Sue is trying to solve for n in the equation shown. If she solves the equation correctly, which of the following could be one step of her solution?

$$5(n + 6) = 2(n - 1)$$

F. $5n + 6 = 2n + 1$

G. $5n + 6 = 2n - 2$

H. $5n + 30 = 2n + 1$

J. $5n + 30 = 2n - 2$

19. SHORT ANSWER The total cost to play paint ball can be represented by the expression $(48x + 54)$ dollars. If Rocko and five friends split the cost equally, what is the cost for each person? Explain how you can use a model to show that your answer is correct

20. Tisa bought movie tickets for herself and two of her friends. She paid $8.50 for each ticket. If Tisa has $14.50 left, how much money did she have before she bought the movie tickets?

A. $23.00

B. $25.50

C. $31.50

D. $40.00

21. What is the solution to the equation below?

$$-\frac{2}{3}p + \frac{1}{6} = -\frac{7}{10}$$

F. $p = -\frac{9}{4}$

G. $p = -\frac{13}{10}$

H. $p = -\frac{4}{5}$

J. $p = -\frac{16}{45}$

22. SHORT ANSWER A shipping company charges $3.50 plus $0.85 per pound to ship a package. Janet shipped a package and the total charge was $8.60. Write and solve an equation to find the number of pounds she was charged for the package.

23. Which number line shows the solution to the inequality below?

$$v - 2 > 1$$

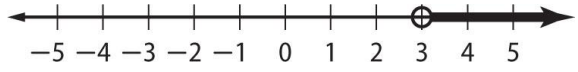
A.



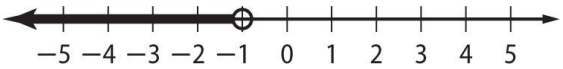
B.



C.



D.



24. Which linear expression would you add to $-8b + 5$ to have a sum of $-b$?

F. $b + 5$

G. $-b - 5$

H. $-7b + 5$

J. $7b - 5$

25. The maximum heights of the high jump bar that Marion cleared in five track meets are shown in the table.

Marion's High Jump Results	
Track Meet	**Height (in.)**
1	59.25
2	60.50
3	62.25
4	57.75
5	64.00

Write an inequality to represent the height she must clear at her next meet to have a mean height of at least 61 inches. Round your answer to the nearest hundredth.