Algebra I
Blizzard Bag # 2

Directions: Complete the following review sheet from Chapters 1 to 6. Be sure to show your work. You will have 2 weeks to complete from the "Snow Day." No Late work will be accepted.

Enjoy!

NAME _____ DATE _____ PERIOD _____

6 Standardized Test Practice

SCORE _____

(Chapters 1–6)

Part 1: Multiple Choice

Instructions: Fill in the appropriate circle for the best answer.

1. Evaluate $[1 + 4(5)] + [3(9) - 7]$. (Lesson 1-2)
A 45 **B** 27 **C** 41 **D** 31
1. Ⓐ Ⓑ Ⓒ Ⓓ

2. Rewrite $3(4a - 2b + c)$ using the Distributive Property. (Lesson 1-4)
F $12a - 2b + c$ **G** $12a - 2b + 3c$ **H** $12a - 6b + c$ **J** $12a - 6b + 3c$
2. Ⓕ Ⓖ Ⓗ Ⓙ

3. How many liters of a 10% saline solution must be added to 4 liters of a 40% saline solution to obtain a 15% saline solution? (Lesson 2-9)
A 20 L **B** 4 L **C** 2 L **D** 48 L
3. Ⓐ Ⓑ Ⓒ Ⓓ

4. When Nick was traveling in Montreal, the currency exchange rate between the U.S. and Canada could be modeled by $d = 1.02c$ where d represents the number of U.S. dollars and c represents the number of Canadian dollars. Solve the equation for Canadian dollar amounts of \$1, \$2, \$5, and \$20. (Lesson 3-1)

F {(1, 1.02), (2, 2.04), (5, 5.10), (20, 20.40)}

G {(1, 1), (2, 2), (5, 5), (20, 20)}

H {(1, 0.98), (2, 1.96), (5, 4.9), (20, 19.61)}

J {(1, 2.02), (2, 3.02), (5, 6.02), (20, 21.02)}

4. Ⓕ Ⓖ Ⓗ Ⓙ

5. If a line passes through (0, –6) and has a slope of –3, what is the equation of the line? (Lesson 4-2)
A $y = -6x - 3$ **B** $x = -6y - 3$ **C** $y = -3x - 6$ **D** $x = -3y - 6$
5. Ⓐ Ⓑ Ⓒ Ⓓ

6. If r is the slope of a line, and m is the slope of a line perpendicular to that line, what is the relationship between r and m? (Lesson 4-4)
F There is no relationship. **H** $r = m$
G $r = -m$ **J** $r = -\frac{1}{m}$
6. Ⓕ Ⓖ Ⓗ Ⓙ

7. Which inequality does *not* have the solution $\{t \mid t > 4\}$? (Lesson 5-2)
A $-t < -4$ **B** $3t > 12$ **C** $\frac{t}{2} > 2$ **D** $-\frac{t}{8} > -\frac{1}{2}$
7. Ⓐ Ⓑ Ⓒ Ⓓ

8. Solve $4 - 2r \geq 3(5 - r) + 7(r + 1)$. (Lesson 5-3)
F $\left\{r \mid r \leq -\frac{3}{2}\right\}$ **G** $\{r \mid r \leq -3\}$ **H** $\{r \mid r \leq -2\}$ **J** $\left\{r \mid r \leq -\frac{9}{4}\right\}$
8. Ⓕ Ⓖ Ⓗ Ⓙ

9. Write a compound inequality for the graph. (Lesson 5-4)

A $x < -1$ and $x \geq 2$ **C** $x \leq -1$ or $x > 2$
B $x < -1$ or $x \geq 2$ **D** $x \leq -1$ and $x > 2$
9. Ⓐ Ⓑ Ⓒ Ⓓ

10. Evaluate $x^2 + 5(y - 3)$ when $x = -3$ and $y = 14$. (Lesson 1-2)
F 64 **G** 58 **H** 61 **J** 29
10. Ⓕ Ⓖ Ⓗ Ⓙ

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6 Standardized Test Practice *(continued)*

11. Solve $8x - 5 = 19$. (Lesson 2-3)

A $\frac{7}{2}$ **B** -3 **C** 3 **D** 6

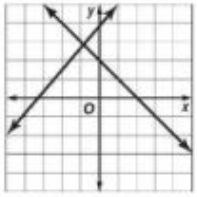
11. Ⓐ Ⓑ Ⓒ Ⓓ

12. Solve $-\frac{4}{x} = \frac{6}{9}$. (Lesson 2-3)

F -6 **G** 6 **H** 12 **J** -12

12. Ⓕ Ⓖ Ⓗ Ⓙ

13. Use the graph to determine how many solutions exist for the system $-4x + 3y = 12$ and $x + y = 2$. (Lesson 6-1)



A 0 **C** 2

B 1 **D** infinitely many

13. Ⓐ Ⓑ Ⓒ Ⓓ

14. Use elimination to solve the system $2x + y = -8$ and $-2x + 3y = -8$ for x. (Lesson 6-3)

F -2 **G** 2 **H** -4 **J** 4

14. Ⓕ Ⓖ Ⓗ Ⓙ

15. The substitution method would be the best to use to solve which system of equations? (Lesson 6-2)

A $5x - 7y = 8$
$2x + 6y = 6$

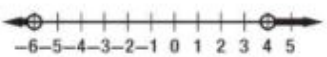
C $3x - 3y = 5$
$-2x + 2y = -6$

B $3x + 2y = 8$
$4x + 3y = 5$

D $x = 4y + 6$
$3x - 2y = 3$

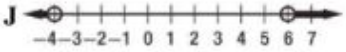
15. Ⓐ Ⓑ Ⓒ Ⓓ

16. Which graph represents the solution of $|n + 5| > 1$? (Lesson 5-5)

F


H


G


J


16. Ⓕ Ⓖ Ⓗ Ⓙ

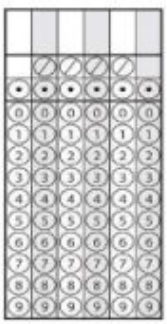
Part 2: Gridded Response

Instructions: Enter your answer by writing each digit of the answer in a column box and then shading in the appropriate circle that corresponds to that entry.

For Questions 17 and 18, determine the value that is missing.

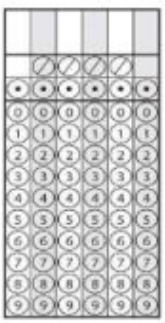
17. The solution set is $\{n \mid n \geq 15\}$ for the inequality $n - 7 \geq$ ___. (Lesson 5-1)

17.



18. If $|a - 8| = 17$, then $a =$ ___ or $a = -9$. (Lesson 2-5)

18.



NAME _____ DATE _____ PERIOD _____

6 Standardized Test Practice *(continued)*

Part 3: Short Response

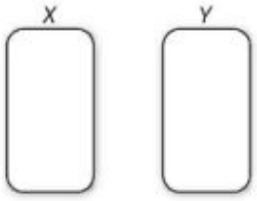
Instructions: Write your answers in the space provided.

19. State whether the percent of change is a percent of increase or a percent of decrease. Then find the percent of change. original: 76; new: 57 (Lesson 2-7)

19. _____

20. Express the relation {(–2, 1), (3, –1), (2, –2), (–2, 0)} as a mapping. (Lesson 1-6)

20.



21. Determine whether –6, –3, 0, 3 … is an arithmetic sequence. If it is, state the common difference. (Lesson 3-4)

21. _____

22. Find the slope of the line that passes through (–2, 0) and (5, –8). (Lesson 3-3)

22. _____

23. The Lopez family drove 165 miles in 3 hours. Write a direct variation equation for the distance driven in any time. How far can the Lopez family drive in 5 hours? (Lesson 3-4)

23. _____

24. Write an equation of a line that passes through (–2, –1) with slope 3. (Lesson 4-3)

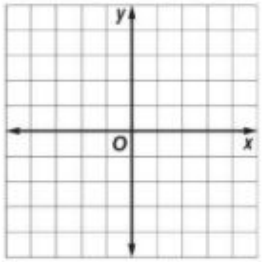
24. _____

25. Solve the system of inequalities by graphing. (Lesson 6-6)

$2x - y \geq 4$

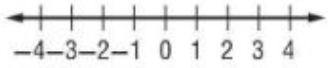
$x - 2y < 4$

25.



26. Solve $12 + r < 15$. Then graph the solution. (Lesson 5-1)

26.



27. Define a variable, write a compound inequality, and solve the problem. (Lesson 5-4)

Seven less than twice a number is greater than 13 or less than or equal to –5.

_____

28. Three times a first number minus a second number equals negative forty. The first number plus twice the second number equals negative four. (Lesson 6-5)

27. _____

a. Define variables and formulate a system of linear equations from this situation.

28a. _____

b. What are the numbers?

28b. _____