

**8MB, Summer Math Packet: Cumulative Review #1***(Glencoe, Algebra I, Chapter 1)***Part 1: Multiple Choice****Instructions:** Fill in the appropriate circle for the best answer.

1. Write an algebraic expression to represent the number of pens that can be bought with 30 cents if each pen costs  $c$  cents. (Lesson 1-1)  
 A  $30 - c$       B  $\frac{30}{c}$       C  $30 + c$       D  $30c$       1. (A) (B) (C) (D)
2. Evaluate  $\frac{7a+b}{b+c}$  if  $a = 2$ ,  $b = 6$ , and  $c = 4$ . (Lesson 1-2)  
 F  $3\frac{1}{3}$       G  $1\frac{1}{2}$       H 3      J 2      2. (F) (G) (H) (J)
3. The measurements of a box are 3.25, 1.4, and 2.1 cm. The measure of the volume is given by the product 9.555. The volume should be rounded to which number? (Lesson 1-5)  
 A  $10 \text{ cm}^3$       B  $9.6 \text{ cm}^3$       C  $9.56 \text{ cm}^3$       D  $9.5 \text{ cm}^3$       3. (A) (B) (C) (D)
4. The equation  $4 + 9 = 4 + 9$  is an example of which property of equality? (Lesson 1-3)  
 F Substitution      G Reflexive      H Symmetric      J Transitive      4. (F) (G) (H) (J)
5. Simplify  $7x^2 + 5x + 4x$ . (Lesson 1-4)  
 A  $7x^2 + 9x$       B  $16x^4$       C  $12x^3 + 4x$       D  $7x^2 + x$       5. (A) (B) (C) (D)
6. Simplify  $7(2x + y) + 6(x + 5y)$ . (Lesson 1-4)  
 F  $20x + 37y$       G  $20x + 6y$       H  $13x + 42y$       J  $15x + 6y$       6. (F) (G) (H) (J)
7. Which of the following relations is a function? (Lesson 1-7)  
 A  $\{(-3, 1), (0, 1), (2, 5)\}$       C  $\{(2, -3), (2, 0), (2, 5)\}$       7. (A) (B) (C) (D)  
 B  $\{(-2, -2), (0, 0), (0, -2)\}$       D  $\{(1, -3), (0, -1), (3, 2), (1, 0)\}$
8. What is the range of the relation described by  $\{(-2, 3), (-1, 0), (-2, 5), (-1, -3)\}$ ? (Lesson 1-6)  
 F {all real numbers}      H  $\{-2, -1\}$       8. (F) (G) (H) (J)  
 G  $\{-1\}$       J  $\{-3, 0, 3, 5\}$
9. The distance an airplane travels increases as the duration of the flight increases. Identify the dependent variable. (Lesson 1-6)  
 A time      B direction      C airplane      D distance      9. (A) (B) (C) (D)
10. Omari drives a car that gets 18 miles per gallon of gasoline. The car's gasoline tank holds 15 gallons. The distance Omari drives before refueling is a function of the number of gallons of gasoline in the tank. Identify a reasonable domain for this situation. (Lesson 1-6)  
 F 0 to 18 miles      H 0 to 270 miles      10. (F) (G) (H) (J)  
 G 0 to 15 gallons      J 0 to 60 mph

# 8MB, Summer Math Packet: Cumulative Review #1 (continued)

11. Evaluate  $x^2 + y^2 + z$ , if  $x = 7$ ,  $y = 6$ , and  $z = 4$ . (Lesson 1-2)

- A 17      B 101      C 89      D 59

11. (A) (B) (C) (D)

12. Which is a good estimate for the distance from Boston, MA to Miami, FL? (Lesson 1-5)

- F 1,200 inches      G 1,200 feet      H 1,200 yards      J 1,200 miles

12. (F) (G) (H) (J)

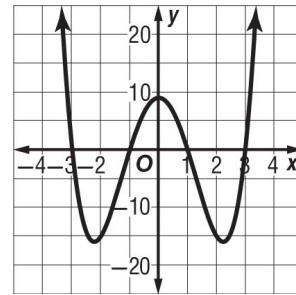
13. Using the Distributive Property to find  $9\left(5\frac{2}{3}\right)$  would give which expression? (Lesson 1-4)

- A  $9(5) + \frac{2}{3}$       B  $9\left(\frac{17}{3}\right)$       C  $9(5) + 9\left(\frac{2}{3}\right)$       D  $9(5)\left(\frac{2}{3}\right)$

13. (A) (B) (C) (D)

14. Which sentence best describes the end behavior of the function shown? (Lesson 1-8)

- F As  $x$  increases,  $y$  decreases, and as  $x$  decreases,  $y$  decreases.  
 G As  $x$  increases,  $y$  increases, and as  $x$  decreases,  $y$  decreases.  
 H As  $x$  increases,  $y$  decreases, and as  $x$  decreases,  $y$  increases.  
 J As  $x$  increases,  $y$  increases, and as  $x$  decreases,  $y$  increases.



14. (F) (G) (H) (J)

15. If  $g(x) = x^2 + 5$ , find  $g(3)$ . (Lesson 1-7)

- A 8      B 9      C 11      D 14

15. (A) (B) (C) (D)

# 8MB, Summer Math Packet: Cumulative Review #1 (continued)

**Find each product or quotient.**

(Prerequisite Skill)

16.  $17 \cdot 8$

17.  $84 \div 7$

18.  $0.9 \cdot 5.6$

19.  $\frac{8}{9} \div \frac{16}{3}$

20. Write an algebraic expression for *six less than twice a number*. (Lesson 1-1)

21. Write a verbal expression for  $4m^2 + 2$ . (Lesson 1-1)

22. Evaluate  $13 - \frac{1}{3}(11 - 5)$ . (Lesson 1-2)

23. Evaluate  $\frac{2b + c^2}{a}$ , if  $a = 2$ ,  $b = 4$ , and  $c = 6$ . (Lesson 1-2)

24. Evaluate  $3(5 \cdot 2 - 9) + 2 \cdot \frac{1}{2}$ . (Lesson 1-2)

25. Evaluate  $\frac{1}{3} \cdot 20 \cdot 6 \cdot \frac{1}{5}$  using the properties of numbers. (Lesson 1-3)

**Simplify each expression.**

26.  $7n + 4n$

(Lesson 1-4)

27.  $5y + 3(2y + 1)$

(Lesson 1-4)

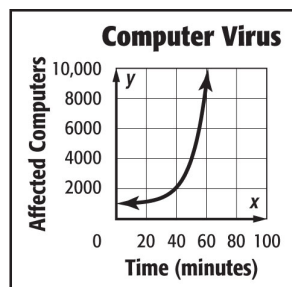
28. Find Jada's debt-to-income ratio if her monthly expenses are \$1850 and her monthly salary is \$2500. (Lesson 1-5)

29. Alvin is mowing his front lawn. His mailbox is on the edge of the lawn. Draw a reasonable graph that shows the distance Alvin is from the mailbox as he mows. Let the horizontal axis show the time and the vertical axis show the distance from the mailbox. (Lesson 1-6)

30. Identify and interpret each feature of the graph shown. (Lesson 1-8)

a. intercept(s)

b. end behavior



16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30a. \_\_\_\_\_

30b. \_\_\_\_\_

**8MB, Summer Math Packet: Cumulative Review #2***(Glencoe, Algebra I, Chapters 1 and 2)***Part 1: Multiple Choice****Instructions:** Fill in the appropriate circle for the best answer.

31. Write an algebraic expression for the following verbal expression *the sum of n and 5*. (Lesson 1-1) 31. (A) (B) (C) (D)  
 A  $5n$                       B  $\frac{n}{5}$                       C  $n + 5$                       D  $n - 5$
32. Determine which of the following relations is a function. (Lesson 1-7) 32. (F) (G) (H) (J)  
 F  $\{(-4, 3), (-2, -2), (0, 2), (0, 5)\}$   
 G  $\{(-3, 1), (-3, 3), (-2, -1), (0, 5)\}$   
 H  $\{(-4, -1), (-2, -1), (-1, -1), (3, 3)\}$   
 J  $\{(2, -5), (-1, -1), (0, 4), (2, -3)\}$
33. Simplify the expression  $7(x - y) - 2(y - x) + 4x$ . (Lesson 1-4) 33. (A) (B) (C) (D)  
 A  $13x - 9y$                       B  $9x - 5y$                       C  $9x - 9y$                       D  $13x - 5y$
34. Evaluate  $a(b - c^2)$  if  $a = \frac{2}{3}$ ,  $b = \frac{3}{4}$ , and  $c = \frac{1}{2}$ . (Lesson 1-2) 34. (F) (G) (H) (J)  
 F  $\frac{1}{65}$                       G  $\frac{1}{3}$                       H  $\frac{1}{4}$                       J  $\frac{2}{3}$
35. Solve the proportion  $\frac{a}{25} = \frac{9}{45}$ . (Lesson 2-6) 35. (A) (B) (C) (D)  
 A 7.8                      B 16.2                      C 125                      D 5
36. Evaluate the expression  $|2x - 3y| + 5z$  if  $x = -3$ ,  $y = 4$ , and  $z = -1$ . (Lesson 2-5) 36. (F) (G) (H) (J)  
 F 23                      G 13                      H -13                      J -23
37. Solve  $-\frac{3}{4}y = \frac{8}{20}$ . (Lesson 2-2) 37. (A) (B) (C) (D)  
 A  $\frac{2}{5}$                       B  $-\frac{3}{10}$                       C  $\frac{8}{15}$                       D  $-\frac{8}{15}$
38. Which equation has a solution of  $-2$ ? (Lesson 2-3) 38. (F) (G) (H) (J)  
 F  $4n + 3 = 11$                       H  $5(1 + n) = -5$   
 G  $4 = 3n - 2$                       J  $3(n + 1) = 2$
39. Find Juan's debt to income ratio if his monthly expenses are \$900 and his monthly salary is \$1200. (Lesson 1-5) 39. (A) (B) (C) (D)  
 A 0.33                      B 0.75                      C 0.9                      D 1.2

# 8MB, Summer Math Packet: Cumulative Review #2 (continued)

40. Translate the following sentence into an equation.  
*The quotient of 24 and x equals 14 minus 2 times x.* (Lesson 2-1)

F  $24x = 14 - 2x$

H  $\frac{24}{x} = 14 - 2x$

G  $24x = 2x - 14$

J  $\frac{24}{x} = 2x - 14$

41. Evaluate  $2^6$ . (Lesson 1-2)

A 12

B 32

C 64

D 128

42. Which pair of ratios forms a proportion? (Lesson 2-6)

F  $\frac{2}{3}$  and  $\frac{4}{9}$

G  $\frac{5}{15}$  and  $\frac{4}{12}$

H  $\frac{4}{12}$  and  $\frac{6}{24}$

J  $\frac{1}{9}$  and  $\frac{9}{10}$

43. Evaluate  $14 - \left(\frac{1}{4}\right)(17 - 5)$ . (Lesson 1-2)

A 17

B 34

C 11

D 120

44. Evaluate  $21 \div 3 + 4 \cdot 2$ . (Lesson 1-2)

F 15

G 22

H 1.9

J 9

40. (F) (G) (H) (J)

41. (A) (B) (C) (D)

42. (F) (G) (H) (J)

43. (A) (B) (C) (D)

44. (F) (G) (H) (J)

# 8MB, Summer Math Packet:

## Cumulative Review #2 (continued)

### Part 3: Short Response

**Instructions:** Write your answer in the space provided.

45. Evaluate  $3y - x^2z$  if  $x = 2$ ,  $y = 14$ , and  $z = 5$ . (Lesson 1-2)

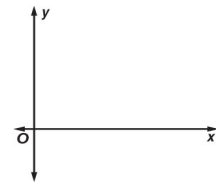
45. \_\_\_\_\_

46. Simplify  $2(u + 3x) + 3(u + x)$ . (Lesson 1-3)

46. \_\_\_\_\_

47. Miguel was riding his bike to school. He got halfway there and realized he had forgotten his backpack. He turned around, went home, retrieved his backpack, and continued his ride to school. Sketch a reasonable graph to show his distance from school from the time he started to the time he arrived at school. Assume his rate is always the same. (Lesson 1-6)

47. \_\_\_\_\_



48. Translate the following sentence into an algebraic equation.  
*Nine times a number  $y$  subtracted from 85 is seven times the sum of four and  $n$ .* (Lesson 2-1)

48. \_\_\_\_\_

49. Solve the following problem by working backward. Three is added to a number, the result is divided by two, and then the new result is added to eighteen. The final result is 35. What is the number? (Lesson 2-3)

49. \_\_\_\_\_

**For Questions 50-52, solve each equation.** (Lessons 2-2 through 2-4)

50.  $-27 = -6 - 3p$

51.  $7a + 2 = 3a - 10$

50. \_\_\_\_\_

52.  $2(x - 3) + 6x = 3(9 - x)$

51. \_\_\_\_\_

53. Solve  $t = \frac{m}{x} + p$  for  $m$ . (Lesson 2-7)

52. \_\_\_\_\_

54. If Ethan's monthly expenses are \$1160 and his debt to income ratio is 0.8, what is his monthly salary? (Lesson 1-5)

53. \_\_\_\_\_

55. A refrigerator should be set at  $38^\circ\text{F}$  with an allowance for  $2^\circ$ . (Lesson 2-5)

54. \_\_\_\_\_

a. Write an equation to find the maximum and minimum temperatures at which the refrigerator should be set.

55a. \_\_\_\_\_

b. Solve the equation to find the maximum and minimum temperatures at which the refrigerator should be set

55b. \_\_\_\_\_

**8MB, Summer Math Packet: Cumulative Review #3***(Glencoe, Algebra I, Chapters 1 - 3)***Part 1: Multiple Choice****Instructions:** Fill in the appropriate circle for the best answer.

56. The student council is selling candy bars to earn money towards their budget for the school dance. Identify the independent and dependent variables. (Lesson 1-6)
- |  |  |   |
|--|--|---|
| A I: student council;<br>D: money earned | C I: candy bars sold;<br>D: money earned | 56. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
| B I: budget;<br>D: school dance          | D I: candy bars sold;<br>D: school dance |   |
57. Dion owns a delivery service. He charges his customers \$15.00 for each delivery. His expenses include \$7000 for the motorcycle he drives and \$0.42 for gasoline per trip. Which equation could Dion use to calculate his profit  $p$  for  $d$  deliveries? (Lesson 1-7)
- |                    |                       |   |
|--------------------|-----------------------|---|
| F $p = 15 - 0.42d$ | H $p = 14.58d - 7000$ | 57. <input type="radio"/> F <input type="radio"/> G <input type="radio"/> H <input type="radio"/> J |
| G $p = 7000 + 15d$ | J $p = 0.42d + 7000$  |   |
58. Evaluate  $60 \div 5 \cdot 6 - 3^2$ . (Lesson 1-2)
- |      |      |      |        |   |
|------|------|------|--------|---|
| A -7 | B -4 | C 63 | D 4761 | 58. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
|------|------|------|--------|---|
59. Jim's new car has 150 miles on the odometer. He takes a trip and drives an average of  $m$  miles each day for three weeks. Which expression represents the mileage on Jim's car after his trip? (Lesson 2-4)
- |              |              |               |               |   |
|--------------|--------------|---------------|---------------|---|
| F $150m + 3$ | G $150 + 3m$ | H $150m + 21$ | J $150 + 21m$ | 59. <input type="radio"/> F <input type="radio"/> G <input type="radio"/> H <input type="radio"/> J |
|--------------|--------------|---------------|---------------|---|
60. Translate the sentence into an equation. (Lesson 2-1)  
*Five times the sum of  $m$  and  $t$  is as much as four times  $r$ .*
- |                |                |                   |                   |   |
|----------------|----------------|-------------------|-------------------|---|
| A $5m + t = 4$ | B $5m + t = r$ | C $5(m + t) = 4r$ | D $m + t = 5(4r)$ | 60. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
|----------------|----------------|-------------------|-------------------|---|
61. Solve  $8(x - 5) = 12(4x - 1) + 12$ . (Lesson 2-4)
- |                   |                  |      |      |   |
|-------------------|------------------|------|------|---|
| F $-\frac{7}{10}$ | G $-\frac{5}{7}$ | H -2 | J -1 | 61. <input type="radio"/> F <input type="radio"/> G <input type="radio"/> H <input type="radio"/> J |
|-------------------|------------------|------|------|---|
62. Evaluate the expression  $|3x - 2y| - z$  if  $x = -2$ ,  $y = \frac{1}{4}$ , and  $z = 3$ . (Lesson 2-5)
- |                  |                  |                   |                   |   |
|------------------|------------------|-------------------|-------------------|---|
| A $3\frac{1}{2}$ | B $2\frac{1}{2}$ | C $-6\frac{1}{2}$ | D $-9\frac{1}{2}$ | 62. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
|------------------|------------------|-------------------|-------------------|---|
63. Determine which equation is a linear equation. (Lesson 3-1)
- |                 |               |            |                         |   |
|-----------------|---------------|------------|-------------------------|---|
| F $x^2 + y = 4$ | G $x + y = 4$ | H $xy = 4$ | J $\frac{1}{x} + y = 4$ | 63. <input type="radio"/> F <input type="radio"/> G <input type="radio"/> H <input type="radio"/> J |
|-----------------|---------------|------------|-------------------------|---|
64. If  $f(x) = 7 - 2x$ , find  $f(3) + 6$ . (Lesson 1-7)
- |      |     |      |       |   |
|------|-----|------|-------|---|
| A 11 | B 7 | C 14 | D -11 | 64. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
|------|-----|------|-------|---|
65. Chapa is beginning an exercise program that calls for 30 push-ups each day for the first week. Each week thereafter, she has to increase her push-ups by 2. Which week of her program will be the first one in which she will do 50 push-ups a day? (Lesson 3-6)
- |            |             |             |             |   |
|------------|-------------|-------------|-------------|---|
| F 9th week | G 10th week | H 11th week | J 12th week | 65. <input type="radio"/> F <input type="radio"/> G <input type="radio"/> H <input type="radio"/> J |
|------------|-------------|-------------|-------------|---|

# 8MB, Summer Math Packet:

## Cumulative Review #3 (continued)

66. Which property of equality is illustrated below? (Lesson 1-3)  
*If  $7 + 9 = 11 + 5$  and  $11 + 5 = 16$ , then  $7 + 9 = 16$ .*

A Transitive                      C Substitution  
 B Reflexive                        D Symmetric

66. (A) (B) (C) (D)

67. Which expression represents the missing second step of simplifying the algebraic expression? (Lesson 1-4)

Step 1  $4(x - 3y) + 6 + 5(x + 1)$

Step 3  $9x - 12y + 11$

F  $4x - 3y + 6 + 5x + 1$       H  $4x - 12y + 6 + 5x + 5$

G  $12(x - y) + 6 + x + 5$       J  $x - 3y + 15 + x + 1$

67. (F) (G) (H) (J)

68. Solve  $48 = -8r$ . (Lesson 2-2)

A  $r = 8$       B  $r = 6$       C  $r = -6$       D  $r = -40$

68. (A) (B) (C) (D)

69. Solve  $4 - (-h) = 12$ . (Lesson 2-2)

F  $h = 16$       G  $h = 8$       H  $h = -8$       J  $h = -16$

69. (F) (G) (H) (J)

For Questions 70 and 71, use the arithmetic sequence 2, 5, 8, 11, . . .

70. Which is an equation for the  $n$ th term of the sequence? (Lesson 3-6)

A  $a_n = 2n + 1$                       C  $a_n = n + 3$   
 B  $a_n = 4n - 2$                       D  $a_n = 3n - 1$

70. (A) (B) (C) (D)

71. What is the 20th term in the sequence? (Lesson 3-6)

F 59      G 60      H 78      J 80

71. (F) (G) (H) (J)



# 8MB, Summer Math Packet: Cumulative Review #3 (continued)

**Part 3: Short Response**

**Instructions:** Write your answer in the space provided.

72. Find the solution of  $y + \frac{2}{3} = \frac{22}{15}$  if the replacement set is  $\frac{2}{5}, \frac{3}{5}, \frac{4}{5}, 1, 1\frac{1}{5}$ .  
(Lesson 1-5) 72. \_\_\_\_\_

73. Simplify  $5m + 8p + 3m + p$ . (Lesson 1-3) 73. \_\_\_\_\_

74. Determine the slope of the line passing through (1, 4) and (3, -1).  
(Lesson 3-3) 74. \_\_\_\_\_

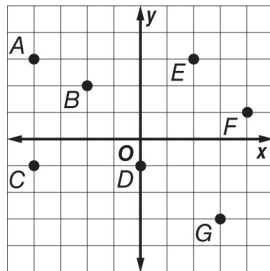
75. Translate the following equation into a verbal sentence.  $\frac{x}{4} - y = -2\left(\frac{x}{y}\right)$   
(Lesson 2-1) 75. \_\_\_\_\_

76. What is the range of  $y = |2x - 1|$ ? (Lesson 3-8) 76. \_\_\_\_\_

77. Solve  $-7x + 23 = 37$ . (Lesson 2-3) 77. \_\_\_\_\_

78. Use cross products to determine whether the ratios  $\frac{4}{7}$  and  $\frac{11}{15}$  form a proportion. Write *yes* or *no*. (Lesson 2-6) 78. \_\_\_\_\_

**For Questions 79 and 80, use the graph.**

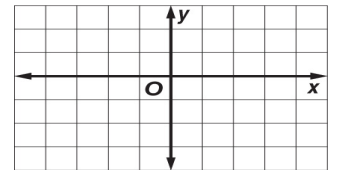


79. Express the relation as a set of ordered pairs. Then determine the domain and range. (Lesson 1-6) 79. \_\_\_\_\_

80. Determine whether the relation is a function. (Lesson 1-7) 80. \_\_\_\_\_

81. Find the  $x$ -intercept of the graph of  $4x = 5 + y$ . (Lesson 3-1) 81. \_\_\_\_\_

82. Graph  $2x - 3y = 6$ . (Lesson 3-1) 82. \_\_\_\_\_



83. Hannah wants to download songs. The total cost to download songs from Site F can be modeled by  $f(x) = 0.99s$ , where  $s$  represents the number of songs downloaded. Site F also charges an \$8 annual membership fee.

a. Write a function  $g(x)$  that represents the cost of downloading songs from Site F. (Lesson 3-5) 83a. \_\_\_\_\_

b. Find the cost of downloading 6 songs with and without the membership fee. (Lesson 3-5) 84b. \_\_\_\_\_

# 8MB, Summer Math Packet: Cumulative Review #4

(Glencoe, Algebra I, Chapters 1 - 4)

## Part 1: Multiple Choice

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

85. If  $a = 2$ ,  $b = 6$ , and  $c = 4$ , then  $\frac{(4a - b)^2}{(b + c)} = ?$  (Lesson 1-2) 85.  A  B  C  D  
 A 4                      B 0.4                      C 40                      D 0.04
86. If  $4 + 7 + 6 = 4 + 7 + 6 + n$ , what is the value of  $n$ ? (Lesson 1-3) 86.  F  G  H  J  
 F 0                      G 1                      H 4                      J 6
87. Lynn has 4 more books than José. If Lynn gives José 6 of her books, how many more will José have than Lynn? (Lesson 1-2) 87.  A  B  C  D  
 A 2                      B 4                      C 8                      D 10
88. If  $x = \frac{16}{24}$ , which value of  $x$  does *not* form a proportion? (Lesson 2-6) 88.  F  G  H  J  
 F  $\frac{2}{3}$                       G  $\frac{3}{4}$                       H  $\frac{12}{18}$                       J  $\frac{32}{48}$
89. Two-thirds of a number added to itself is 20. What is the number? (Lesson 2-1) 89.  A  B  C  D  
 A 12                      B 13                      C 30                      D 33
90. 16% of 980 is 9.8% of what number? (Lesson 2-4) 90.  F  G  H  J  
 F 1.6                      G 16                      H 160                      J 1600
91. What is the zero of the linear function  $y = \frac{1}{2}x + 2$ ? (Lesson 3-2) 91.  A  B  C  D  
 A  $-\frac{1}{2}$                       B  $-\frac{1}{4}$                       C -2                      D -4
92. The range of a relation includes the integers  $\frac{x}{4}$ ,  $\frac{x}{5}$ , and  $\frac{x}{8}$ . What could be a value for  $x$  in the domain? (Lesson 1-6) 92.  F  G  H  J  
 F 20                      G 30                      H 32                      J 40
93. A line with a slope of  $-1$  passes through points at  $(2, 3)$  and  $(5, y)$ . Find the value of  $y$ . (Lesson 3-3) 93.  A  B  C  D  
 A -6                      B -3                      C 0                      D 6
94. If a line passes through  $(0, -6)$  and has a slope of  $-3$ , what is an equation for the line? (Lesson 4-1) 94.  F  G  H  J  
 F  $y = -6x - 3$                       H  $y = -3x - 6$   
 G  $x = -6y - 3$                       J  $x = -3y - 6$

# 8MB, Summer Math Packet:

## Cumulative Review #4 (continued)

### Part 3: Short Response

Instructions: Write your answers in the space.

95. Write  $2 \cdot r \cdot r \cdot t \cdot t$  using exponents. (Lesson 1-1)

95. \_\_\_\_\_

96. Evaluate  $2xy - y^2$  if  $x = 6$  and  $y = 12$ . (Lesson 1-2)

96. \_\_\_\_\_

**Simplify each expression.** (Lessons 1-2 through 1-5)

97.  $12 - 6 \times 5$

98.  $6(2 + 3) - 9$

97. \_\_\_\_\_

98. \_\_\_\_\_

99.  $(2 \cdot 3)^2 - 2^2$

100.  $4 \cdot 9 - 2 \cdot 10$

99. \_\_\_\_\_

100. \_\_\_\_\_

101.  $4(2y + y) - 6(4y + 3y)$

102.  $\frac{12a - 18b}{-6}$

101. \_\_\_\_\_

102. \_\_\_\_\_

**For Questions 103-105 solve each equation.** (Lessons 2-2 and 2-3)

103.  $13 - m = 21$

103. \_\_\_\_\_

104.  $\frac{3}{4}x = \frac{2}{3}$

104. \_\_\_\_\_

105.  $4x + 12 = -16$

105. \_\_\_\_\_

106. Solve  $x - 2y = 12$  if the domain is  $\{-3, -1, 0, 2, 5\}$ . (Lesson 3-1)

106. \_\_\_\_\_

107. Determine whether  $\{(1, 4), (2, 6), (3, 7), (4, 4)\}$  is a function, and explain your reasoning. (Lesson 1-7)

107. \_\_\_\_\_

108. A study found a positive correlation between the average number of hours people spend watching television and the average number of hours they spend on the Internet each week. Determine whether this situation illustrates correlation only, or correlation and causation. (Lesson 4-5)

108. \_\_\_\_\_

109. Determine the slope of the line passing through  $(2, 7)$  and  $(-5, 2)$ . (Lesson 4-2)

109. \_\_\_\_\_

110. Write an equation in slope-intercept form for the line passing through  $(2, 6)$  with a slope of  $-3$ . (Lesson 3-4)

110. \_\_\_\_\_

111. Write an equation for the line passing through  $(-6, 5)$  and  $(-6, -4)$ . (Lesson 4-1)

111. \_\_\_\_\_

112. Lucy owns a bakery. In 2006, she sold pies for \$9.50 each. In 2010, she sold pies for \$17.50 each. (Lesson 3-3)

112a. \_\_\_\_\_

a. Find the annual rate of change for the price of a pie from 2006 to 2010.

b. How much do you think Lucy will sell a pie for in 2014?

112b. \_\_\_\_\_