

Algebra Review Summative

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1. What value below is equivalent to the expression?

$$5 - 2(3 + 9) + 4$$

- A. -23
- B. -15
- C. 33
- D. 40

$$5. -40 - (-53)$$

- A. -93
- B. 93
- C. -13
- D. 13

2. Brad's scores on three math tests are three consecutive even integers. The sum of his test scores is represented by the expression below, where m represents his first test score. Which expression is equivalent to the sum of Brad's test scores?

$$(m) + (m + 2) + (m + 4)$$

- A. $9m$
- B. $8m^3$
- C. $m^3 + 6$
- D. $3m + 6$

6. Evaluate the expression.

$$(4x + 5) - 6$$

- A. $-24x + 30$
- B. $24x - 30$
- C. $-24x - 30$
- D. $-24x + 5$

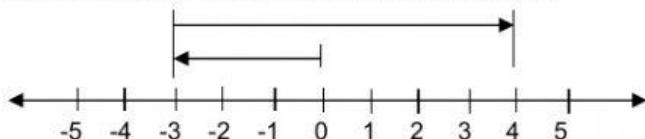
3. Which of the following equations is an example of the distributive property?

- A. $r(s + t) = rs + rt$
- B. $a(bc) = (ab)c$
- C. $x + (y + z) = (x + y) + z$
- D. $b(c + a) = b(d + c)$

7. Which decimal is equivalent to $\frac{22}{9}$?

- A. .409
- B. .409
- C. 2.4
- D. 2.4

4. Sandy used a number line to simplify a numerical expression. Her work is illustrated below. Based on the number line, which expression did Sandy simplify?



- A. $-3 + 7$
- B. $-3 - 7$
- C. $4 - 3$
- D. $7 + 3$

8. Evaluate the expression.

$$-7(3m - 4) + 2$$

- A. $-21m - 2$
- B. $-21m - 26$
- C. $21m + 30$
- D. $-21m + 30$

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9. Identify the GCF and factor it out. Write your answer in factored form

$$5x^2y - 10xy$$

10. What is a number that when you multiply it by 6 and you subtract 4 from the product, you get 50?

a. $7\frac{2}{3}$ c. 14
b. 9 d. 324

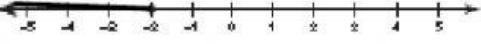
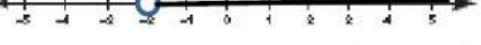
11. Which is the solution of the equation?

$$5x - 14 = -29$$

a. $x = 3$ c. $x = -3$
b. $x = 13$ d. $x = -9.4$

12. Which graph represents the solution to the inequality $3x - 5 \geq -11$? Solve for x.

$$x = \underline{\hspace{2cm}}$$

a. 
b. 
c. 
d. 

13. What is the solution to the equation?

$$8x - 9 = -41$$

a. $x = 4$ c. $x = -6.25$
b. $x = -4$ d. $x = 6.25$

14. Which inverse operation would you use to solve the equation?

$$\frac{m}{5} - 8 = -6$$

a. Add 8 to each side and divide each side by 5.
b. Add 8 to each side and multiply each side by 5.
c. Subtract 8 from each side and multiply each side by 5.
d. Multiply each side by 5 and add 8 to each side.

15. What is the solution to the inequality?

$$-7x > 49$$

a. $x < 7$ c. $x < -7$
b. $x > 7$ d. $x > -7$

16. What is the solution to the equation?

$$4x + 12 = 48$$

a. 9 c. 144
b. 15 d. 240

17. Find all the possible values of x that satisfy the inequality. $\frac{x}{3} - 8 \geq 1$

A. $x \geq -21$
B. $x \geq 3$
C. $x \geq 27$
D. $x \geq 30$

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18. The inequality $4x + 260 \leq 400$ represents the cost to repair Tom's car. The cost of parts is \$260 and it will take 4 hours of work. If x represents the labor cost per hour and Tom needs to keep the total \$400 or less, what is the highest labor cost per hour that he can afford?

19. The cost for a company to produce shirts is \$10,000 plus \$2.50 per shirt. The equation $C = 2.50x + 10,000$ is used to calculate the total cost, C , to produce x shirts. If the total cost to produce shirts was \$14,967.50, how many shirts did the company produce?

20. What is the solution for x if $3x + 7 \geq -20$?

Graph your answer on the number line.

