

NAME _____

SUMMER ASSIGNMENT INCOMING FRESHMAN

WRITE THE CHOICE ON THE ANSWER SHEET

1. If $x = -4$ and $y = 3$, what is the value of $x - 3y^2$?

- (1) -13 (3) -31
(2) -23 (4) -85

2. In the expression $15z$, what is 15 called?

- (1) the numerator (3) the coefficient
(2) the operator (4) the origin

3. The temperature inside an freezer is controlled using the expression x^2y . What is the value of when $x = 2$ and $y = -3$?

- (1) -6 (3) -12
(2) 6 (4) 12

4. In which list are the numbers in order from least to greatest?

- (1) $3.2, \pi, 3\frac{1}{3}, \sqrt{3}$ (3) $\sqrt{3}, \pi, 3.2, 3\frac{1}{3}$
(2) $\sqrt{3}, 3.2, \pi, 3\frac{1}{3}$ (4) $3.2, 3\frac{1}{3}, \sqrt{3}, \pi$

5. Which number has the largest value?

- (1) $1\frac{1}{2}$ (3) 1.45
(2) $\sqrt{2}$ (4) 125%

6. The expression $\sqrt{152}$ is between what two numbers?

- (1) 11 and 12 (3) 14 and 15
(2) 12 and 13 (4) 15 and 16

7. One member of the solution set of $-5 < x \leq -1$ is

- (1) -1 (3) 3
(2) -5 (4) -6

8. When $x = 2$ and $y = 3$, which expression has the smallest value?

- (1) $x - y$ (3) $x + y$
(2) $x \cdot y$ (4) $x \div y$

9. Which set contains the number π ?

- (1) integers (3) natural numbers
(2) rational numbers (4) irrational numbers

10. Which is an irrational number?

- (1) 0 (3) $-\frac{1}{3}$
(2) π (4) $\sqrt{9}$

11. What is the additive inverse of $-4a$?

- (1) $\frac{a}{4}$
(2) $4a$
(3) $-\frac{4}{a}$
(4) $-\frac{1}{4a}$

12. The reciprocal of $\frac{1}{x}$, $x \neq 0$, is

- (1) $-\frac{1}{x}$ (3) $-x$
(2) x (4) $1 - \frac{1}{x}$

13. The quotient of $3 \div 0$ is

- (1) irrational (3) irregular
(2) rational (4) undefined

14. Which property is illustrated by the equation $-8 + 0 = -8$?

- (1) additive inverse
(2) additive identity
(3) commutative property
(4) distributive property

15. The expression $y^3 + y^3$ is equivalent to

- (1) $2y^6$
(2) $2y^3$
(3) y^9
(4) y^6

16. What is the product of $-2x^2y^3$ and $5x^3y$?

- (1) $10x^6y^4$
(2) $-10x^3y^3$
(3) $-10x^5y^4$
(4) $-10x^6y^3$

17. Which monomial is equivalent to $(7x^4)^2$?

- (1) $49x^6$
(2) $49x^8$
(3) $14x^6$
(4) $14x^8$

18. If $15x^6y$ is divided by $-3x^3$, the quotient is

- (1) $-5x^2$
(2) $-5x^3y$
(3) $5x^2$
(4) $5x^3y$

19. The product of $6x^3$ and $5x^4$ is

- (1) $11x^{12}$
(2) $11x^7$
(3) $30x^{12}$
(4) $30x^7$

20. What is the value of 2^{-3} ?

- (1) $\frac{1}{6}$
(2) $\frac{1}{8}$
(3) -6
(4) -8

21. The distance from the Sun to the planet Neptune is about 2,790,000,000 miles. Expressed in scientific notation, this distance in miles is

- (1) 2.79×10^9
(2) 2.79×10^{-9}
(3) 27.9×10^7
(4) 27.9×10^{-7}

22. The scientific notation 4.5×10^{-3} is equivalent to

- (1) 4500 (3) 0.045
(2) 0.450 (4) 0.0045

23. What is the sum of $5x - 6y + z$ and $5x - 6y - z$?

- (1) $10x - 12y + 2z$ (3) $10x + 12y - z$
(2) $10x - 12y$ (4) $10x + 12y$

24. If $2a^2 - 6a + 5$ is subtracted from $3a^2 - 2a + 3$, the result is

- (1) $5a^2 - 8a + 8$
- (2) $a^2 + 4a - 2$
- (3) $-a^2 - 4a + 2$
- (4) $a^2 - 8a + 8$

25. Express the sum of $4x^2 - 3x + 2$ and $-2x^2 + 7x + 3$ as a trinomial.

26. Simplify: $(x + 5)(2x - 1)$

- (1) $x^2 + 4x - 5$
- (2) $2x^2 + 4x - 5$
- (3) $2x^2 + 9x - 5$
- (4) $2x^2 + 9x - 10$

27. The expression $(x - 3)^2$ is equivalent to

- (1) $x^2 - 9$
- (2) $x^2 + 9$
- (3) $x^2 - 6x + 9$
- (4) $x^2 + 6x + 9$

28. Find the quotient when $18a^3 - 72a^2 + 6a$ is divided by $6a$ ($a \neq 0$).

- (1) $3a^2 - 12a$
- (2) $3a^2 - 12a + 1$
- (3) $3a^3 - 12a^2 + a$
- (4) $3a^2 - 12a + a$

29. The expression $\sqrt[90]{}$ is equivalent to

- (1) $9\sqrt{10}$
- (2) $6\sqrt{15}$
- (3) $3\sqrt{10}$
- (4) $10\sqrt{3}$

30. Solve for x : $15x - 3(3x + 4) = 6$

- (1) 1
- (2) $-\frac{1}{2}$
- (3) 3
- (4) $\frac{1}{3}$

31. Solve for s : $7s + 4(3 - s) = 18$

- (1) 1
- (2) 2
- (3) -2
- (4) 3

32. What is the value of x in the equation

- $4(2x + 1) = 27 + 3(2x - 5)$
- (1) 21
 - (2) 9
 - (3) $7\frac{1}{2}$
 - (4) 4

33. Which inequality is equivalent to $2x - 1 > 5$?

- (1) $x > 6$
- (2) $x > 2$
- (3) $x < 3$
- (4) $x > 3$

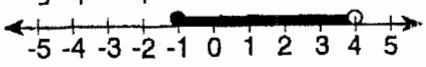
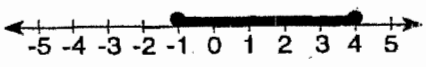
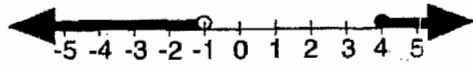
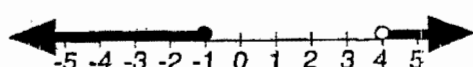
34. Which is the greatest integer that makes the inequality $3 - 2x > 9$ a true statement?

- (1) -2
- (2) 2
- (3) 5
- (4) -4

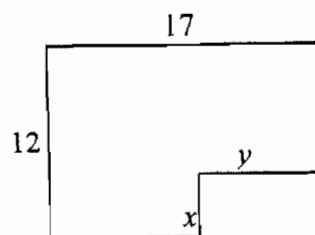
35. If one side of a regular hexagon is $2x + 12$, then the perimeter is represented by

- (1) $2x + 24$
- (2) $10x + 60$
- (3) $12x + 60$
- (4) $12x + 72$

36. Which graph represents the inequality $-1 \leq x < 4$?

- (1) 
- (2) 
- (3) 
- (4) 

37. The figure below shows a rectangle with a corner cut out.



What is the perimeter of this figure?

- (1) 29
- (2) 37
- (3) 58
- (4) It depends on the values of x and y .

38. The perimeter of a square is $20x - 4$. Which expression represents a side of the square in terms of x ?

- (1) $5x$
- (2) $10x - 2$
- (3) $8x - 16$
- (4) $5x - 1$

39. The area of a rectangle is represented by $32x^3$. If the length of this rectangle is $4x$, then the width is

- (1) $16x^2$
- (2) $16x^3$
- (3) $8x^2$
- (4) $8x^3$

40. What is the approximate circumference of a circle with radius 3?

- (1) 7.07
- (2) 9.42
- (3) 18.85
- (4) 28.27

41. If the circumference of a circle is 36π , what is the length of a radius of the circle?

- (1) 6
- (2) 18
- (3) 36
- (4) 72

42. If the measure of two complementary angles are in the ratio of 7:8, the degree measure of the larger angle is

- (1) 40
- (2) 44
- (3) 48
- (4) 52

43. The value of $5!$ is

- (1) 120
- (2) 25
- (3) 15
- (4) -5