



NAME : _____

CLASS : _____

DATE : _____

VLO - Simplifying & Solving - Week 3

50 Questions

1. Simplify $\frac{2x^{-3}y^8}{4x^5y^0}$

☐ a) 1

☐ b) $2y^8x^8$

☐ c) $\frac{y^8}{2x^8}$

☐ d) $\frac{2y^8}{x^8}$

2. Solve for y. $4x - 8y = 40$

☐ a) $y = 2x - 5$

☐ b) $y = 2x + 5$

☐ c) $y = \frac{1}{2}x - 5$

☐ d) $y = -\frac{1}{2}x + 5$

3. Solve $-10 + 6x = 4(3x - 1)$

☐ a) $x = 1$

☐ b) $x = -1$

☐ c) $x = -2$

☐ d) $x = 2$

4. What is the first step in solving the equation $2a - 4(a - 5) = 10$

☐ a) Add 4 to both sides

☐ b) Add the 2a and a

☐ c) Distribute 4 to a and -5

☐ d) Distribute -4 to a and -5

5. Solve the equation:

$$3x - x + 2 = 4(2x - 1)$$

☐ a) infinite solutions

☐ b) $x = 1$

☐ c) $x = -1$

☐ d) no solution

6. Which expression contains exactly 3 terms?

☐ a) $5 + 6xy$

☐ b) $9 + 4t$

☐ c) $8 + 2y - 5x$

☐ d) $24xy$

7. What is the constant term of:

$$14 - 8x - 7y$$

☐ a) -8

☐ b) -7

☐ c) 14

☐ d) none

8. A math statement that says that 2 things are equal

☐ a) Expression

☐ b) Equation

9. A number on its own that does not change and is without a variable is known as a _____.

☐ a) Term

☐ b) Variable

☐ c) Coefficient

☐ d) Constant

10. $(x - 4)(x - 6)$

☐ a) $x^2 - 10x + 24$

☐ b) $x^2 - 10x - 24$

☐ c) $x^2 + 10x + 24$

☐ d) $x^2 + 10x - 24$

11. $(2s + 9)(3s - 4)$

☐ a) $3s^2 + 19s - 36$

☐ b) $4s^2 + 19s - 36$

☐ c) $5s^2 + 19s - 36$

☐ d) $6s^2 + 19s - 36$

12.

	C	D
E	$2x^2$	$-x$
5	$10x$	-5

Find the expression that should replace "C"

☐ a) $2x^2$

☐ b) $2x$

☐ c) $5x$

☐ d) -5

13.

	C	D
E	$2x^2$	$-x$
5	$10x$	-5

Find the expression that should replace "D"

☐ a) -5

☐ b) $-x$

☐ c) $5x$

☐ d) -1

14.

	C	D
E	$2x^2$	$-x$
5	$10x$	-5

Find the expression that should replace "E"

☐ a) $2x$

☐ b) x

☐ c) $-x$

☐ d) 5

15. Simplify.

$$(y^9)^{-2}$$

☐ a) y^{18}

☐ b) y^7

☐ c) $\frac{1}{y^{18}}$

☐ d) $\frac{1}{y^{-18}}$

16. Write the given equation in slope-intercept form:

$$12x - 2y = 15$$

☐ a) $y = -6x + \frac{15}{2}$

☐ b) $y = 6x - \frac{15}{2}$

☐ c) $y = -6x - \frac{15}{2}$

☐ d) $y = 6x + \frac{15}{2}$

17. Anything raised to a power of zero is always:

☐ a) 0

☐ b) 1

☐ c) itself

☐ d) negative

18.



$$(b + 8)5$$

☐ a) $b + 40$

☐ b) $5b - 40$

☐ c) $5b + 40$

☐ d) $5b + 8$

19. Which of the following is equivalent to $3h + 7(2 + 4h)$?

☐ a) $90h$

☐ b) $7h + 20$

☐ c) $50h$

☐ d) $31h + 14$

20. Which of the following is equivalent to $-8 - 9(5 + 2x)$?

☐ a) $-5 - 2x$

☐ b) $-18x - 53$

☐ c) $-53 + 18x$

☐ d) $18x - 53$

21. $-9(-7x+2)=-459$

☐ a) $x=-12$

☐ b) $x=-7$

☐ c) $x=12$

☐ d) $x=3$

22. Solve the equation:

$$4 - 2(x - 3) = 24$$

☐ a) -7

☐ b) 7

☐ c) 14

☐ d) -14

23. **$2x + 3$ inches**
 **$x - 6$ inches**

What is the Perimeter?

- ☐ a) $3x - 3$ inches ☐ b) $6x - 6$ inches
☐ c) $3x - 6$ inches ☐ d) $6x - 3$ inches

24. **$2x + 3$ inches**
 **$x - 6$ inches**

What is the Area?

- ☐ a) $2x^2 - 3x - 18$ inches² ☐ b) $2x^2 + 3x + 18$ inches²
☐ c) $2x^2 + 9x - 18$ inches² ☐ d) $2x^2 - 9x - 18$ inches²

25. Find the sum.
 $(3 - 2x + 2x^2) + (4x - 5 + 3x^2)$

- ☐ a) $7x - 7x + 5x^2$ ☐ b) $5x^2 + 2x - 2$
☐ c) $5x^2$ ☐ d) $5x^2 + 6x + 8$

26. $(5x+2)(x^2-3x+6)$

- ☐ a) $5x^3 - 17x^2 + 24x + 12$ ☐ b) $5x^3 + 17x^2 - 24x + 12$
☐ c) $5x^3 - 13x^2 + 24x + 12$ ☐ d) $5x^3 + 13x^2 - 24x - 12$

27. A polynomial that has two terms is a:

- ☐ a) polynomial ☐ b) monomial
☐ c) binomial

28. Which is an example of a linear polynomial?

☐ a) x^2-5

☐ b) $6x+4$

☐ c) $5x^5$

☐ d) $2x^3-9x^2$

29. What is the classification of the following polynomial?

$$x^2-8x+10$$

☐ a) quadratic binomial

☐ b) cubic trinomial

☐ c) linear binomial

☐ d) quadratic trinomial

30. Subtract the following polynomials:

$$(3x^2-3x+2)-(x^2-2x+1)$$

☐ a) $2x^2+x+1$

☐ b) $2x^2-5x+3$

☐ c) $2x^2-x+1$

☐ d) $4x^2-5x+3$

31.

Simplify $\frac{12a^2b^8}{24a^4b^2}$.

☐ a) $2a^2b^6$

☐ b) $1/2a^2b^6$

☐ c) $b^6/2a^2$

☐ d) $2b^6/a^2$

32. Simplify (evaluate): 3^{-3}

☐ a) -27

☐ b) -9

☐ c) $-1/9$

☐ d) $1/27$

33. According to exponent rules, when we **divide powers** we _____ the exponents.

- | | |
|--------------------------------------|--------------------------------------|
| ☐ a) add | ☐ b) subtract |
| ☐ c) multiply | ☐ d) divide |

34. According to exponent rules, when we **multiply powers** we _____ the exponents.

- | | |
|--------------------------------------|--------------------------------------|
| ☐ a) add | ☐ b) subtract |
| ☐ c) multiply | ☐ d) divide |

35. According to exponent rules, when we **raise a power to a power** we _____ the exponents.

- | | |
|--------------------------------------|--------------------------------------|
| ☐ a) add | ☐ b) subtract |
| ☐ c) multiply | ☐ d) divide |

36. $(2^8)^2$

- | | |
|--------------------------------------|--------------------------------------|
| ☐ a) 2^{16} | ☐ b) 2^{10} |
| ☐ c) 4^{16} | ☐ d) 4^8 |

37. the amount of space **INSIDE** a shape

- | | |
|---------------------------------------|--------------------------------------|
| ☐ a) perimeter | ☐ b) dot plot |
| ☐ c) bar graph | ☐ d) area |
| ☐ e) length | |

38. simplify so there are no negative or zero exponents.

$$(s^4tu^2)(s^7t^{-1})$$

☐ a) $s^{11}u^2$

☐ b) $s^{28}t^{-1}u^2$

☐ c) s^3u^2

☐ d) $s^{11}t^2u$

39. Evaluate for $f(-5)$

$$f(x) = -|x - 7| + 3$$

☐ a) 1

☐ b) -9

☐ c) 5

☐ d) 15

40. Write an equation from the table.

-2	-1	0	1	2
13	8	3	-2	-7

☐ a) $y = -5/3 x + 3$

☐ b) $y = 3x - 5$

☐ c) $y = -5x + 3$

☐ d) $y = -3/5 x - 5$

41. rewrite the product as a sum

$$(2x^2 - 11)(x^2 + 4)$$

☐ a) $4x^4 - 7x^2 - 44$

☐ b) $2x^2 - 44$

☐ c) $3x^2 - 7$

☐ d) $2x^4 - 3x^2 - 44$

42. Simplify $7x(4x + 3y - 2)$

☐ a) $28x + 21xy - 14x$

☐ b) $28x^2 + 21xy - 14x$

☐ c) $11x + 10xy - 2$

☐ d) $28x + 21y - 2x$

43. The coefficient in this monomial is: $-6y^2$

☐ a) 6

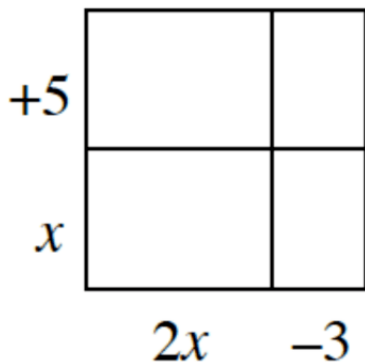
☐ b) -6

☐ c) 2

☐ d) y

☐ e) y^2

44.



Write the area as a product.

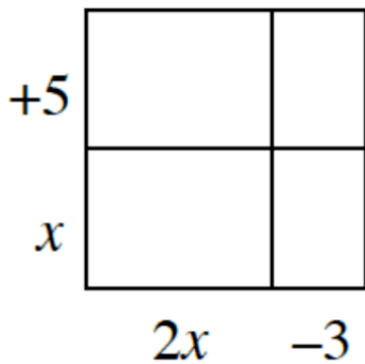
☐ a) $2x^2 - 15$

☐ b) $(2x + 5)(x - 3)$

☐ c) $(x + 5)(2x - 3)$

☐ d) $2x(x + 5)$

45.



Write the area as a sum.

☐ a) $2x^2 - 15$

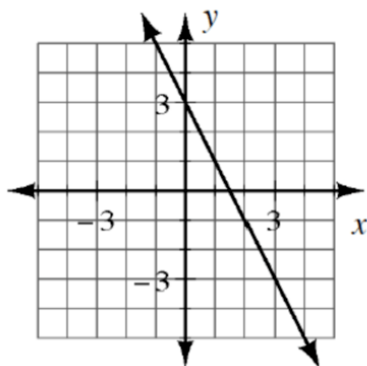
☐ b) $3x + 2$

☐ c) $2x^2 + 7x - 15$

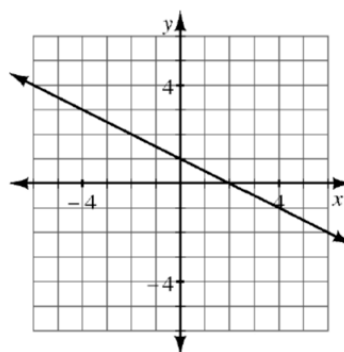
☐ d) $2x^2 + 10x - 15$

46. Which graph does this line belong to? $y = -\frac{1}{2}x + 1$

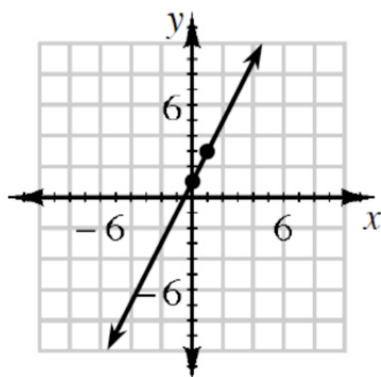
☐ a)



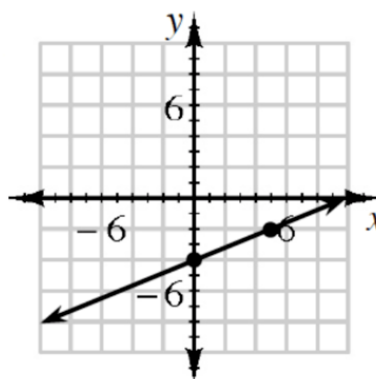
☐ b)



☐ c)



☐ d)



47. How many coefficients does this expression have?

$$15x + 4 - 9y + 38 + 2z$$

☐ a) 1

☐ b) 2

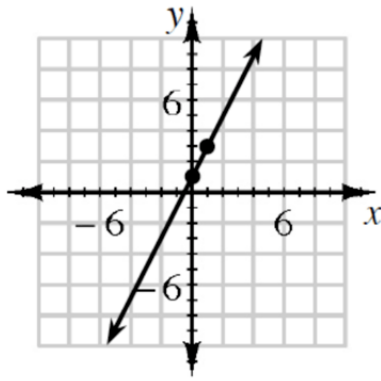
☐ c) 3

☐ d) 4

☐ e) 5

48.

What is the equation of this line?



☐ a) $2x + 1$

☐ b) $y = 2x + 1$

☐ c) $y = \frac{1}{2}x + 1$

☐ d) $\frac{1}{2}x + 1$

49. Explain the error in the simplification below: $(x^3y)(x^{-4}z^{-2}) = x^{-1}yz^{-2}$

☐ a) Should have multiplied the x exponents.

☐ b) Should have subtracted the x exponents.

☐ c) Should have moved the negative exponents to the bottom of a fraction.

☐ d) There is no error.

50. $(x^{-4})^3 = ?$

☐ a) x^{-12}

☐ b) x^{-1}

☐ c) $\frac{1}{x^{-1}}$

☐ d) $\frac{1}{x^{12}}$