

Unit 2: Expressions and Equations Study Guide**Evaluating Expressions**

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| 1. $9x - 3 + x^2$, when $x = 4$ | 2. $-2n \div 3 + (4n - n)$, when $n = 6$ |
| 3. The expression $1.8c + 32$ can be used to convert a temperature in degrees Celsius, C, to degrees Fahrenheit, F. If the temperature is 40° C, what is the temperature in degrees Fahrenheit? | |



Combining Like Terms

Use circles, squares, triangles, lines or colored highlighters to group like terms.

Simplify:

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| 4. $5h - 2hm + 12 - 7h + 2hm + h$ | 6. $(x^2 + 8x - 1) + (x^2 - 9x - 2)$ |
| 5. $-0.5(x - 8) - (0.1x + 1)$ | 7. $8z - 23q - 12z - 3q$ |

Distributive Property**Simplify:**

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| 8. $3(2x - 6)$ | 12. $8y - 4(-2y + 4)$ |
| 9. $1.5(x + 4)$ | 13. $\frac{1}{2}(8x - 2) - (x + 14)$ |
| 10. $-\frac{1}{3}(6x - 27)$ | 14. $k(3n - 14)$ |
| 11. Find the area: $1\frac{1}{2}$  $6x$ | 15. Find the Perimeter: $x+1$  x |

Solving Equations

Steps to solving a two-step equation:

1. Do the inverse operation for addition or subtraction.
2. Do the inverse operation for multiplication or division.
3. Check your answer

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| 16. $4x-8=16$ | 22. $\frac{y}{12}-5=11$ |
| 17. $3.2x+2.6=-23$ | 23. $-6.85+\frac{m}{4}=-11$ |
| 18. $0.7t-3.2=1.7$ | 24. $10-5m=45$ |
| 19. $-5.6=\frac{h}{5}+12.2$ | 25. $-3x-10=-46$ |
| 20. $\frac{3}{2}x+\frac{1}{5}=\frac{3}{4}$ | 26. $\frac{3}{7}+\frac{1}{4}y=\frac{1}{2}$ |
| 21. $\frac{1}{2}(4-k)=\frac{2}{5}$ | 27. $-3=5+2$ |

Word Problems

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| 28. The sum of three consecutive even numbers is 48. What are the smallest of these numbers? | 30. How old am I if 400 reduced by 2 times my age is 244? |
| 29. Aliyah had \$24 to spend on seven pencils. After buying them she had \$10. How much did each pencil cost? | 31. Imani spent half of her weekly allowance playing mini-golf. To earn more money her parents let her wash the car for \$4. What is her weekly allowance if she ended with \$12? |
| 32. Alex rents a car for one day. The charge is \$18 plus \$0.12 per mile. Alex wants to spend exactly \$30. How many miles can he drive? | 33. Nick opens a savings account with \$50. Each week after, he deposits \$15. In how many weeks will he have saved \$500? |

Name: _____ Block: _____ Date: _____

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