Year 8 Expressions and Equations – Mixed Practice

HappyKids.fit

Year 8 · Maths · Expressions, Formulae and Equations · Mixed practice · 30 questions

Name _____ **Date** _____

A. Mixed practice (mixed order)

1. Solve $2(x + 5) = x + 20$.

Answer _____

2. Simplify $10y^5 \div 2y^2$.

Answer _____

3. Solve $7x - 12 = 6x - 5$.

Answer _____

4. Work out the value of $5b^2 - 2ab$ when $a = 3$ and $b = 1$.

Answer _____

5. Make x the subject of the formula $y = 3x + 5$.

Answer _____

6. Factorise $20a^2 - 12a$ completely.

Answer _____

7. Expand $5y(y^2 + 3)$.

Answer _____

8. Is $5a^2 + 3a$ an expression, a formula or an equation? Explain.

Answer _____

9. Expand $2n(n^2 + 6)$.

Answer _____

10. Make a the subject of the formula $v = u + at$.

Answer _____

11. Think of a number n. Halve it and then add 3. Write an expression for the result.

Answer _____

12. Solve $8x + 12 = 5x + 33$.

Answer _____

13. Work out the value of $(a + b)^2$ when $a = 2$ and $b = -3$.

Answer _____

14. Farah factorises $20x + 30$ as $2(10x + 15)$. Explain why this is not fully factorised and factorise it completely.

Answer _____

15. n is an integer and $2 \leq n < 8$. List all the possible values of n.

Answer _____

16. Factorise $32a - 12$ completely. Answer _____

17. Simplify $15m^6 \div 5m^3$. Answer _____

18. Hana says a formula and an equation are the same thing. Is Hana right? Explain.

Answer _____

19. Expand $-2n^2(3n + 3)$. Answer _____

20. Simplify $6x^2 \times 6x^2$. Answer _____

21. Hana says $(a + b)^2$ is always equal to $a^2 + b^2$. Is Hana right? Explain.

Answer _____

22. Make c the subject of the formula $y = mx + c$.

Answer _____

23. Solve $8x + 6 = 2x + 30$.

Answer _____

24. n is an integer and $-5 \leq n \leq -1$. List all the possible values of n.

Answer _____

25. To solve $6x + 5 = 3x + 20$, Lina writes $9x + 5 = 20$. Explain the mistake and solve the equation.

Answer _____

26. Factorise $8x^2 + 10x$ completely.

Answer _____

27. A rectangle is 4 cm longer than it is wide. Its perimeter is 32 cm. Write an equation for the width w and solve it.

Answer _____

28. Think of a number n. Take a quarter of it and then subtract 9. Write an expression for the result.

Answer _____

29. Work out the value of $a^3 + 3b^2$ when $a = 3$ and $b = -3$.

Answer _____

30. Is $n/2 + 4 = 9$ an expression, a formula or an equation? Explain.

Answer _____