Operaciones Combinadas. Números enteros
Ejercicios Resueltos y Propuestos

Matemáticas con Juan

May 31, 2025

Ejercicios Resueltos

1. $5 \cdot 2$

$$\begin{aligned} 5 \cdot 2 &= 5 + 5 \\ &= 10. \end{aligned}$$

2. $12 \div 2$

$$\begin{aligned} 12 &= 2 + 2 + 2 + 2 + 2 + 2 \\ 12 \div 2 &= 6. \end{aligned}$$

3. 2^5

$$\begin{aligned} 2^5 &= 2 \times 2 \times 2 \times 2 \times 2 \\ &= 4 \times 2 \times 2 \times 2 \\ &= 8 \times 2 \times 2 \\ &= 16 \times 2 \\ &= 32. \end{aligned}$$

4. $5 + 5 \cdot 2$

$$\begin{aligned} 5 + 5 \cdot 2 &= 5 + (5 + 5) \\ &= 5 + 10 \\ &= 15. \end{aligned}$$

5. $2 \cdot 3 - 4$

$$\begin{aligned} 2 \cdot 3 - 4 &= (2 + 2 + 2) - 4 \\ &= 6 - 4 \\ &= 2. \end{aligned}$$

6. $6 \div 2 + 2$

$$\begin{aligned} 6 &= 2 + 2 + 2 \\ 6 \div 2 &= 3, \\ 3 + 2 &= 5. \end{aligned}$$

7. $7 - 15 \div 5$

$$\begin{aligned} 15 &= 5 + 5 + 5 \\ 15 \div 5 &= 3, \\ 7 - 3 &= 4. \end{aligned}$$

8. $2^5 + 2 \cdot 2$

$$\begin{aligned} 2^5 &= 32, \\ 2 \cdot 2 &= 2 + 2 = 4, \\ 32 + 4 &= 36. \end{aligned}$$

9. $4 \cdot (5 - 3)$

$$\begin{aligned} 5 - 3 &= 2, \\ 4 \cdot 2 &= 4 + 4 = 8. \end{aligned}$$

10. $10 - 2 \cdot (6 + 1)$

$$\begin{aligned} 6 + 1 &= 7, \\ 2 \cdot 7 &= 2 + 2 + 2 + 2 + 2 + 2 + 2 = 14, \\ 10 - 14 &= -4. \end{aligned}$$

11. $3 \cdot 5 + 3 \cdot (4 - 2)$

$$\begin{aligned} 3 \cdot 5 &= 3 + 3 + 3 + 3 + 3 = 15, \\ 4 - 2 &= 2, \\ 3 \cdot 2 &= 3 + 3 = 6, \\ 15 + 6 &= 21. \end{aligned}$$

12. $2^2 + 2 \cdot 5 - 9 \div (6 - 3)$

$$\begin{aligned} 2^2 &= 4, \\ 2 \cdot 5 &= 5 + 5 = 10, \\ 6 - 3 &= 3, \\ 9 &= 3 + 3 + 3, \\ 9 \div 3 &= 3, \\ 4 + 10 - 3 &= 11. \end{aligned}$$

13. $(2^3 + \sqrt{16}) \times 2$

$$\begin{aligned} 2^3 &= 8, \\ \sqrt{16} &= 4, \\ 8 + 4 &= 12, \\ 12 \times 2 &= 12 + 12 = 24. \end{aligned}$$

14. $\sqrt{49} + 2^4 - 5$

$$\begin{aligned} \sqrt{49} &= 7, \\ 2^4 &= 16, \\ 7 + 16 - 5 &= 18. \end{aligned}$$

15. $(3 + \sqrt{9})^2 - 7$

$$\begin{aligned} \sqrt{9} &= 3, \\ 3 + 3 &= 6, \\ 6^2 &= 36, \\ 36 - 7 &= 29. \end{aligned}$$

16. $5 \times 2^2 - \sqrt{36} + 1$

$$\begin{aligned} 2^2 &= 4, \\ 5 \times 4 &= 20, \\ \sqrt{36} &= 6, \\ 20 - 6 + 1 &= 15. \end{aligned}$$

17. $\sqrt{81} - (2^3 - 3)$

$$\begin{aligned} 2^3 &= 8, \\ 8 - 3 &= 5, \\ \sqrt{81} &= 9, \\ 9 - 5 &= 4. \end{aligned}$$

18. $(4^2 \div 2) + \sqrt{25} - 3$

$$\begin{aligned} 4^2 &= 16, \\ 16 &= 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2, \\ 16 \div 2 &= 8, \\ \sqrt{25} &= 5, \\ 8 + 5 - 3 &= 10. \end{aligned}$$

19. $(\sqrt{64}-2)^3 \div 2$

$$\begin{aligned}\sqrt{64} &= 8,\\ 8-2 &= 6,\\ 6^3 &= 6\times 6\times 6 = 216,\\ 216 &= 2+2+\cdots+2 \text{ (108 veces)},\\ 216 \div 2 &= 108.\end{aligned}$$

20. $2^3 + \sqrt{4} \times (5-2)$

$$\begin{aligned}2^3 &= 8,\\ \sqrt{4} &= 2,\\ 5-2 &= 3,\\ 2\times 3 &= 6,\\ 8+6 &= 14.\end{aligned}$$

21. $(2+\sqrt{9}) \times 2^2 - 6$

$$\begin{aligned}\sqrt{9} &= 3,\\ 2+3 &= 5,\\ 2^2 &= 4,\\ 5\times 4 &= 20,\\ 20-6 &= 14.\end{aligned}$$

22. $\sqrt{100} + (3^2 \times 2) - 5$

$$\begin{aligned}\sqrt{100} &= 10,\\ 3^2 &= 9,\\ 9\times 2 &= 18,\\ 10+18-5 &= 23.\end{aligned}$$

23. $(2^2+\sqrt{16}) \div 2 + 3$

$$\begin{aligned}2^2 &= 4,\\ \sqrt{16} &= 4,\\ 4+4 &= 8,\\ 8\div 2 &= 4,\\ 4+3 &= 7.\end{aligned}$$

24. $3^3 - (\sqrt{9} + 2)$

$$\begin{aligned} 3^3 &= 27, \\ \sqrt{9} &= 3, \\ 3 + 2 &= 5, \\ 27 - 5 &= 22. \end{aligned}$$

25. $\sqrt{144} - 2^2 + (6 \div 3)$

$$\begin{aligned} \sqrt{144} &= 12, \\ 2^2 &= 4, \\ 6 &= 3 + 3, \\ 6 \div 3 &= 2, \\ 12 - 4 + 2 &= 10. \end{aligned}$$

26. $(\sqrt{25} + 3)^2 \div 4$

$$\begin{aligned} \sqrt{25} &= 5, \\ 5 + 3 &= 8, \\ 8^2 &= 64, \\ 64 &= 4 + 4 + \cdots + 4 \text{ (16 veces)}, \\ 64 \div 4 &= 16. \end{aligned}$$

27. $4^2 - (\sqrt{36} \div 3) + 2$

$$\begin{aligned} 4^2 &= 16, \\ \sqrt{36} &= 6, \\ 6 &= 3 + 3, \\ 6 \div 3 &= 2, \\ 16 - 2 + 2 &= 16. \end{aligned}$$

Ejercicios Propuestos

1. $\left(3^2+4\right)\times 2-\sqrt{36}$
2. $5+2\cdot\left(\sqrt{49}-3\right)$
3. $\dfrac{(6+2)^2}{4}+3$
4. $\sqrt{64}-\left(2^3-1\right)+4$
5. $2^3\times\left(5-\sqrt{9}\right)+6\div 2$
6. $\dfrac{\sqrt{81}-2^2}{5}-1$
7. $4\times\left(3+2\right)-2^2+\sqrt{25}$
8. $\dfrac{(7-3)^3}{8}+2$
9. $\sqrt{100}+5\times\left(2^2-1\right)-3$
10. $\left(2+\sqrt{16}\right)\times\left(3-1\right)-5$

Más Información

Para más información, te dejo aquí la lista de reproducción de números enteros del canal MATEMÁTICAS CON JUAN, en donde encontrarás estos ejercicios en formato vídeo, junto con otros:

https://www.youtube.com/playlist?list=PLZeRcx60JO53ir6Bno4F0B3rMYxeI0bc2