

Repaso para el examen 2.

1

2. Resuelve las siguientes operaciones combinadas.

$$a) [18 + 5 \cdot (6 - 9)] - [3 - 16 \div (5 + 3)] =$$

$$[18 + 5 \cdot (-3)] - [3 - 16 \div 8]$$

$$[18 - 15] - [3 - 2]$$

$$3 - 1$$

$$+ \underline{\underline{2}}$$

$$b) 28 \div (-7) - (-6) \cdot 5 \cdot [23 - 5 \cdot (9 - 4)] =$$

$$-4 - (-30) \cdot [23 - 5 \cdot (5)]$$

$$-4 + 30 \cdot [23 - 25]$$

$$-4 + 30 \cdot [-2]$$

$$-4 - 60$$

$$\underline{\underline{-64}}$$

$$c) [10 - (21 - 14)] - [5 + (17 - 11 + 6)] =$$

$$[10 - (7)] - [5 + (12)]$$

$$[10 - 7] - [17]$$

$$3 - 17$$

$$- \underline{\underline{14}}$$

$$d) [48 - 5 \cdot (-9) \div 3] - 6 + 4 \cdot [19 - 3 \cdot (-7)] =$$

$$[48 + 45 \div 3] - 6 + 4 \cdot [19 + 21] =$$

$$[48 + 15] - 6 + 4 \cdot [40]$$

$$63 - 6 + 160$$

$$+ \underline{\underline{217}}$$

$$e) 16 - [5 - (-9)] \div (-7) + 7 \cdot [-5 - 3 \cdot (-2)] =$$

$$16 - [5 + 9] \div (-7) + 7 \cdot [-5 + 6]$$

$$16 - [14] \div (-7) + 7 \cdot 1$$

$$16 - 14 \div (-7) + 7$$

$$16 + 2 + 7$$

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2

$$\begin{aligned} f) \quad & 250 \cdot 2 \div 4 + 35 - 60 \div 2 \\ & 500 \div 4 + 35 - 30 \\ & 125 + 35 - 30 \\ & \quad \underline{\underline{+ 130}} \end{aligned}$$

$$\begin{aligned} g) \quad & [4 + (6 - 9 - 13)] - [5 - (8 + 2 - 18)] = \\ & [4 + (-16)] - [5 - (-8)] \\ & [4 - 16] - [5 + 8] \\ & -12 - 13 \\ & \quad \underline{\underline{- 25}} \end{aligned}$$

2. - Realiza las siguientes Raíces Cuadradas:

$$\begin{aligned} a) \quad & 400 \Rightarrow \sqrt{400} = \underline{\underline{20}} \text{ es exacta.} \\ & 20 \times 20 = 400 \end{aligned}$$

$$\begin{aligned} b) \quad & \sqrt{121} = \underline{\underline{11}} \text{ es exacta.} \\ & 11 \times 11 = 121. \end{aligned}$$

c) $\sqrt{225} = 15$ es exacta.

$$15 \times 15 = 225.$$

d) $\sqrt{169} = 13$ es exacta.

$$13 \times 13 = 169.$$

3.- Realiza las siguientes potencias:

a) $7^{10} \cdot 7^2 = 7^{10+2} = 7^{12}$

b) $8^{23} \cdot 8^3 = 8^{23+3} = 8^{26}$

c) $(9^0)^3 = 9^{0 \times 3} = 9^0 = 1$

d) $(4^{10})^3 = 4^{10 \times 3} = 4^{30}$

e) $5^3 \cdot 5^0 = 5^{3+0} = 5^3$

f) $6^3 \cdot 6^5 \cdot 6^4 = 6^{3+5+4} = 6^{12}$

4.- Calcula las siguientes operaciones combinadas:

$$\begin{aligned}
 a) & 3^2 \cdot (15+5)^2 + 2^3 \cdot (15-5)^4 = \\
 & 9 \cdot (20)^2 + 8 \cdot (10)^4 = \\
 & 9 \cdot 400 + 8 \cdot 10.000 = \\
 & 3600 + 80.000 \\
 & \quad \quad \quad \underline{\underline{+ 83600}}
 \end{aligned}$$

$$\begin{aligned}
 b) & 5 \cdot (4-2)^2 + 1^2 \cdot (2^3-5)^2 \\
 & 5 \cdot (2)^2 + 1 \cdot (8-5)^2 \cdot \\
 & 5 \cdot 4 + 1 \cdot (3)^2 \cdot \\
 & 20 + 1 \cdot 9 \\
 & 20 + 9 \\
 & \quad \quad \quad \underline{\underline{+ 29}}
 \end{aligned}$$

$$\begin{aligned}
 c) & 560 - 2^2 \cdot (34-24)^2 \cdot \\
 & 560 - 4 \cdot (10)^2 \\
 & 560 - 4 \cdot 100 \\
 & 560 - 400
 \end{aligned}$$

$$\begin{aligned}
 d) \quad & 532 + 2 \cdot (4^3 - 4^2)^2 = \\
 & 532 + 2 \cdot (64 - 16)^2 \\
 & 532 + 2 \cdot (48)^2 \\
 & 532 + 2 \cdot 2304 \\
 & 532 + 4608 \\
 & \quad \vee \\
 & \quad \underline{\underline{5140}}
 \end{aligned}$$

$$\begin{aligned}
 e) \quad & 2 \cdot (3^2 - 3)^2 + 2^2 \cdot (5^2 - 5)^2 = \\
 & 2 \cdot (9 - 3)^2 + 4 \cdot (25 - 5)^2 = \\
 & 2 \cdot (6)^2 + 4 \cdot (20)^2 \\
 & 2 \cdot 36 + 4 \cdot 400 \\
 & 72 + 1600 \\
 & \quad \underline{\underline{1672}}
 \end{aligned}$$

$$\begin{aligned}
 f) \quad & (8-5)^3 + 2 \cdot (4^2 - 13) - 7 \cdot (6^2 - 30) = \\
 & (3)^3 + 2 \cdot (16 - 13) - 7 \cdot (36 - 30) \\
 & 27 + 2 \cdot (3) - 7 \cdot (6) \\
 & 27 + 6 - 42 \\
 & \quad \underline{\underline{-9}}
 \end{aligned}$$

$$\begin{aligned}
 g) \quad & 720 + 3^2 \cdot (20 - 15) = \\
 & 720 + 9 \cdot (5) \\
 & 720 + 45 \\
 & \quad \underline{\underline{765}}
 \end{aligned}$$

$$\begin{aligned}
 h) \quad & 3^3 - 2^2 + 4 \cdot (7 - 2)^2 = \\
 & 27 - 4 + 4 \cdot (5)^2 = \\
 & 27 - 4 + 4 \cdot 25 \\
 & 27 - 4 + 100 \\
 & \quad \underline{\underline{+ 123}}
 \end{aligned}$$

$$i) (10-3)^2 + 2 \cdot [6-5 \cdot (3^2-2)^2]$$

$$(7)^2 + 2 \cdot [6-5 \cdot (9-2)^2]$$

$$49 + 2 \cdot [6-5 \cdot (7)^2]$$

$$49 + 2 \cdot [6-5 \cdot 49]$$

$$49 + 2 \cdot [6-245]$$

$$49 + 2 \cdot [-239]$$

$$49 - 478$$

$$\begin{array}{r} - 478 \\ \hline \hline \end{array}$$