

ACTIVIDAD #8

① $3\sqrt{80} + 4\sqrt{63} - 6\sqrt{180} - 4\sqrt{7}$

$$\begin{array}{r} 3\sqrt{80} \\ \sqrt{2^4 \cdot 2^2 \cdot 5} \\ 2 \cdot 2 \sqrt{5} \end{array}$$

$$\boxed{4\sqrt{5}}$$

$$\begin{array}{r} 80|2 \\ 40|2 \\ 20|2 \\ 10|2 \\ 5|5 = 2^4 \cdot 5 \\ 1 \end{array}$$

$$2^4 = 2^2 \cdot 2^2 \cdot 5$$

$$4\sqrt{63}$$

$$\sqrt{3^2 \cdot 7}$$

$$\boxed{3\sqrt{7}}$$

$$\begin{array}{r} 63|3 \\ 21|3 \\ 7|7 = 3^2 \cdot 7 \\ 1 \end{array}$$

$-6\sqrt{180} \dots 180 \mid 2$
 $\sqrt{2^2 \cdot 3^2 \cdot 5}$
 $2 \cdot 3 \sqrt{5}$
 $6\sqrt{5}$

$180 \mid 2$
 $90 \mid 2$
 $45 \mid 3$
 $15 \mid 3$
 $5 \mid 5$
 1
 $= 2^2 \cdot 3^2 \cdot 5$

$-4\sqrt{7}$

$3 \cdot 4\sqrt{5} + 4 \cdot 3\sqrt{7} - 6 \cdot 6\sqrt{5} - 4\sqrt{7}$
 $12\sqrt{5} + 12\sqrt{7} - 36\sqrt{5} - 4\sqrt{7}$
 $12 - 36 = -24\sqrt{5}$
 $12 - 4 = 8\sqrt{7}$
 $-24\sqrt{5} + 8\sqrt{7}$ Respuesta //

② $5\sqrt[3]{ab^2} - 4\sqrt[3]{ab^2} - 8\sqrt[3]{ab^2} - 12\sqrt[3]{ab^2}$
 $5 - 4 - 8 - 12 = -19$
 $-19\sqrt[3]{ab^2}$ Respuesta //

$$\textcircled{3} \quad 3\sqrt{2xy^2} - 3\sqrt{18x^3} - [x+2y]\sqrt{2x}$$

$$3\sqrt{2xy^2} - 3\sqrt{18x^3} - x + 2y + \sqrt{2x}$$

$$3\sqrt{18x^3} \quad 18 \quad 3$$

$$x^3 = x^2 \cdot x^1$$

$$\sqrt{2 \cdot 3^2} \quad 9 \quad 3$$

$$3 \cdot 3 = 2 \cdot 3^2$$

$$\sqrt{x^2 \cdot x^1}$$

$$3x\sqrt{2x}$$

$$3\sqrt{2xy^2} - 3 \cdot 3x\sqrt{2x} - x + 2y + \sqrt{2x}$$

$$3\sqrt{2xy^2} - 9x\sqrt{2x} - x + 2y + \sqrt{2x}$$

$$-9 + 1 - x = -9$$

$$\boxed{3\sqrt{2xy^2} - 9x\sqrt{2x} + 2y} \quad \text{Respuesta}$$

$$\textcircled{4} \quad 7\sqrt{80} - 2\sqrt{800} - 5\sqrt{320} - \sqrt{450}$$

$$7\sqrt{80}$$

$$80 \quad 2$$

$$40 \quad 2$$

$$\sqrt{2^4 \cdot 2^2 \cdot 5^2}$$

$$20 \quad 2$$

$$10 \quad 2$$

$$2 \cdot 2 \sqrt{5}$$

$$\boxed{4\sqrt{5}}$$

$$5 \cdot 5 = 2^4 \cdot 5$$

$$1$$

$$2^4 = 2^2 \cdot 2^2 \cdot 5$$

CUARTO BACHILLERATO EN CIENCIAS Y LETRAS CON DIPLOMADO EN DERECHO Y CRIMINALISTICA

$2 \sqrt{800}$

$\sqrt{2^4 \cdot 2^4 \cdot 2 \cdot 5^2}$

$2 \cdot 2 \cdot 5 \sqrt{2}$

$20 \sqrt{2}$

800 2

400 2

200 2

100 2

50 2

25 5

55 = $2^5 \cdot 5^2$

1

$2^5 = 2^2 \cdot 2^2 \cdot 2$

$5^2 = 5^2$

$5 \sqrt{320}$

$\sqrt{2^4 \cdot 2^4 \cdot 2^2 \cdot 5}$

$2 \cdot 2 \cdot 2 \sqrt{5}$

$8 \sqrt{5}$

320 2

160 2

80 2

40 2

20 2

10 2

55 = $2^6 \cdot 5$

1

$2^6 = 2^2 \cdot 2^2 \cdot 2^2$

$\sqrt{450}$

$\sqrt{2 \cdot 3^2 \cdot 5^2}$

$3 \cdot 5 \sqrt{2}$

$15 \sqrt{2}$

450 2

225 3

75 3

25 5

55 = $2 \cdot 3^2 \cdot 5^2$

1

$$\begin{aligned} & 7 \cdot 4\sqrt{5} - 2 \cdot 20\sqrt{2} - 5 \cdot 8\sqrt{5} - 15\sqrt{2} \\ & 28\sqrt{5} - 40\sqrt{2} - 40\sqrt{5} - 15\sqrt{2} \\ & 28 - 40 = -12 \\ & -40 - 15 = -55 \\ & \boxed{-12\sqrt{5} - 55\sqrt{2}} \quad \text{Respuesta} \end{aligned}$$