

CONTROL 2

1. —

a) 18, 24 y 36

$$\begin{array}{r|l} 18 & 2 \\ \hline 9 & 3 \\ \hline 3 & 3 \\ \hline 1 & \end{array}$$

$$\begin{array}{r|l} 24 & 2 \\ \hline 12 & 2 \\ \hline 6 & 2 \\ \hline 3 & 3 \\ \hline 1 & \end{array}$$

$$\begin{array}{r|l} 36 & 2 \\ \hline 18 & 2 \\ \hline 9 & 3 \\ \hline 3 & 3 \\ \hline 1 & \end{array}$$

$$18 = 2 \cdot 3^2$$

$$24 = 2^3 \cdot 3$$

$$36 = 2^2 \cdot 3^2$$

$$\text{m.c.m} = 3^2 \cdot 2^3 = \underline{\underline{72}}$$

b) 60, 100 y 88

$$\begin{array}{r|l} 60 & 2 \\ \hline 30 & 2 \\ \hline 15 & 3 \\ \hline 5 & 5 \\ \hline 1 & \end{array}$$

$$\begin{array}{r|l} 100 & 2 \\ \hline 50 & 2 \\ \hline 25 & 5 \\ \hline 5 & 5 \\ \hline 1 & \end{array}$$

$$\begin{array}{r|l} 88 & 2 \\ \hline 44 & 2 \\ \hline 22 & 2 \\ \hline 11 & 11 \\ \hline 1 & \end{array}$$

$$60 = 2^2 \cdot 3 \cdot 5$$

$$100 = 2^2 \cdot 5^2$$

$$88 = 2^3 \cdot 11$$

$$\text{m.c.m} = 2^3 \cdot 5^2 \cdot 3 \cdot 11$$

$$\text{m.c.m} = 6600$$

2. —

a) $(-3) + (-5) \cdot (-2)$

$$-3 - 5 \cdot (-2)$$

$$-3 + 10$$

$$+ \boxed{7}$$

b) $[(-2) - (-5)] + (-5) \cdot (-6)$

$$-2 + 5 + 30$$

$$35 - 2$$

$$\boxed{+33}$$

$$c) (82 + 23) : [-3 \cdot (-3 + 5 \cdot 2)]$$

$$105 : [-3 \cdot (-3 + 10)]$$

$$105 : [-3 \cdot 7]$$

$$105 : (-21)$$

$$d) 16 : (-2) \overset{-5}{=} (-4 + 2) + 5 \cdot (-1)$$

$$-8 - (-2) - 5$$

$$-8 + 2 - 5$$

$$\underline{\underline{-11}}$$

$$e) 8 - 6 : (-3) + 4 \cdot (-2) + 5 \cdot (-10)$$

$$8 + 2 - 8 - 50$$

$$10 - 58$$

$$\underline{\underline{-48}}$$

$$f) 4 - (-5 + 2) - 15 : (-5) + 4 \cdot (-2)$$

$$4 - (-3) + 3 - 8$$

$$4 + 3 + 3 - 8$$

$$10 - 8$$

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

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$$g) 2 + (8 : 4) - (-2 \cdot 3) + 9 : (-3)$$

$$2 + 2 - (-6) - 3$$

$$2 + 2 + 6 - 3$$

$$10 - 3$$

$$\underline{\underline{+7}}$$

$$h) 8 : (-4) - (-5 - 3) + 3 \cdot 2$$

$$-2 - (-8) + 6$$

$$-2 + 8 + 6$$

$$\underline{\underline{+12}}$$

$$i) 4 \cdot 14 : (-2) + 9 \cdot (-3) - 2 : (-2)$$

$$56 : (-2) - 27 + 1$$

$$-28 - 27 + 1$$

$$\underline{\underline{-54}}$$

$$j) 3-4: (-4) + 4 \cdot (-4) - 1$$

$$3 + 1 - 16 - 1$$

$$4 - 16 - 1$$

$$\boxed{-13}$$

3. _____

$$a) \quad \boxed{100} + \boxed{50} - \boxed{70} + \boxed{200}$$
$$2^2 \cdot 5^2 + 2 \cdot 5^2 - 2 \cdot 5 \cdot 7 + 2^3 \cdot 5^2$$

$$5 \cdot 2 [2 \cdot 5 + 5 - 7 + 2^2 \cdot 5]$$

$$10 \cdot [10 + 5 - 7 + 20]$$

$$10 \cdot [35 - 7]$$

$$10 \cdot [28]$$

$$\boxed{280}$$

$$\begin{array}{r|l} 100 & 2 \\ 50 & 2 \\ \hline 25 & 5 \\ 5 & 5 \\ \hline 1 & \end{array} \quad \begin{array}{r|l} 50 & 2 \\ 25 & 5 \\ \hline 5 & 5 \\ 1 & \end{array}$$

$$\begin{array}{r|l} 70 & 2 \\ 35 & 5 \\ \hline 7 & 7 \\ 1 & \end{array} \quad \begin{array}{r|l} 200 & 2 \\ 100 & 2 \\ 50 & 2 \\ \hline 25 & 5 \\ 5 & 5 \\ \hline 1 & \end{array}$$

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$$b) 20 \cdot 25 + 125 \cdot 5 - 35 \cdot 70$$

$$2^2 \cdot 5 \cdot 5^2 + 5^3 \cdot 5 - 5 \cdot 7 \cdot 2 \cdot 5 \cdot 7$$

$$\Rightarrow 2^2 \cdot 5^3 + 5^4 - 5^2 \cdot 7^2 \cdot 2$$

$$5^2 \cdot [2^2 \cdot 5 + 5^2 - 7^2 \cdot 2]$$

$$25 \cdot [20 + 25 - 98]$$

$$25 \cdot [-53]$$

$$\boxed{-1325}$$

$$c) 4 \cdot 10 + 3 \cdot 15 - 5 \cdot 50$$

$$2^2 \cdot 5 \cdot 2 + 3 \cdot 5 \cdot 3 - 5 \cdot 5^2 \cdot 2$$

$$5 \cdot [2^3 + 3^2 - 5^2 \cdot 2]$$

$$5 \cdot [8 + 9 - 50]$$

$$5 \cdot (-33)$$

$$\boxed{-165}$$

$$d) 825 + 675 - 1500$$

$$5^2 \cdot 3 \cdot 11 + 5^2 \cdot 3^3 - 2^2 \cdot 5^3 \cdot 3$$

$$5^2 \cdot 3 [11 + 3 - 2^2 \cdot 5]$$

$$75 \cdot [11 + 9 - 20]$$

$$75 \cdot [20 - 20]$$

$$75 \cdot [0]$$

$$\boxed{0}$$