

CONTROL 3

1. _____

$$\begin{array}{r|l} 14 & 2 \\ 7 & 7 \\ 1 & \end{array}$$

$$\begin{array}{r|l} 49 & 7 \\ 7 & 7 \\ 1 & \end{array}$$

$$\begin{array}{r|l} 28 & 2 \\ 14 & 2 \\ 7 & 7 \\ 1 & \end{array}$$

$$14 = 2 \cdot 7$$

$$49 = 7^2$$

$$28 = 2^2 \cdot 7$$

$$\text{m.c.m} = 7^2 \cdot 2^2$$

$$\text{m.c.m} = \underline{\underline{196}}$$

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

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

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

$$30 = 2 \cdot 5 \cdot 3$$

$$50 = 2 \cdot 5^2$$

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

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

$$\text{m.c.m} = 25 \cdot 4 \cdot 3$$

$$\text{m.c.m} = \underline{\underline{300}}$$

2. _____

$$a) -12 + (-64) + (-17) + 4 =$$

$$-12 - 64 - 17 + 4$$

$$-93 + 4$$

$$\underline{\underline{-89}}$$

$$b) 25 - 50 - 56 + 50 - 25 + 56 =$$
$$131 - 131$$

$$\boxed{0}$$

$$c) 2 \cdot [3 + (-2) \cdot 5] + (-2) \cdot (-5) \cdot (-3) =$$

$$2 \cdot [3 - 10] - 30$$

$$2 \cdot [-7] - 30$$

$$-14 - 30$$

$$\boxed{-44}$$

$$d) -6 - 5 \cdot [5 \cdot (-2) - 5] + (-5) \cdot 4 =$$

$$-6 - 5 \cdot [-10 - 5] - 20$$

$$-6 - 5 \cdot [-15] - 20$$

$$-6 + 75 - 20$$

$$75 - 26$$

$$\boxed{+49}$$

CONTROL 3

$$\begin{aligned} e) \quad & -9 : 3 - [(8-10) - (9-2)] = \\ & -3 - [-2 - 7] \\ & -3 - [-9] \\ & -3 + 9 \\ & \boxed{\underline{\underline{+6}}} \end{aligned}$$

$$\begin{aligned} f) \quad & [(-4) \cdot 2 + 20] : (-4) + 2 \cdot (9 : (-3)) = \\ & [-8 + 20] : (-4) + 2 \cdot (-3) \\ & 12 : (-4) + 2 \cdot (-3) \\ & -3 - 6 \\ & \boxed{\underline{\underline{-9}}} \end{aligned}$$

3.

$$\begin{aligned} a) \quad & 15 \cdot 25 + 100 \cdot 5 - 25 \cdot 70 = \\ & 5 \cdot 3 \cdot 5^2 + 5^2 \cdot 2^2 \cdot 5 - 5^2 \cdot 2 \cdot 7 \cdot 5 \\ \Rightarrow & 5^3 \cdot 3 + 5^3 \cdot 2^2 - 5^3 \cdot 7 \cdot 2 \\ & 5^3 \cdot [3 + 2^2 - 7 \cdot 2] \end{aligned}$$

$\rightarrow \boxed{-875}$

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

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

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

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

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

$$5 \cdot (-33)$$

$$\boxed{\underline{\underline{-165}}}$$

$$c) 2 \cdot 6 - 4 \cdot 7 + 6 \cdot 9$$

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

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

$$2 [2 \cdot 3 - 2 \cdot 7 + 3^3]$$

$$2 \cdot [6 - 14 + 27]$$

$$2 \cdot [19]$$

$$\boxed{\underline{\underline{+38}}}$$

$$d) 75 + 30 - 45 + 25 =$$

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

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

$$5 \cdot [15 + 6 - 9 + 5]$$

$$5 \cdot [17]$$

$$\boxed{\underline{\underline{+85}}}$$