

R000) RESPOSTAS

R001)

$$\begin{array}{r|l}
 4-8 & 2 \\
 2-4 & 2 \\
 1-2 & 2 \\
 1-1 & \hline
 & 2^3=8
 \end{array}$$

$$2022, 2030, 2038, 2046, 2054$$

$\xrightarrow{+8} \quad \xrightarrow{+8} \quad \xrightarrow{+8} \quad \xrightarrow{+8}$

$$R: 2030, 2038, 2046, 2054$$

R002) a) $M(6) = \{0, 6, 12, 18, 24, 30, 36, \dots\}$ R002) b) $M(9) = \{0, 9, 18, 27, 36, \dots\}$ R002) c) $M(6 \text{ e } 9) = \{0, 18, 36, \dots\}$

R002) d) 18

$$\begin{array}{r|l}
 6-9 & 2 \\
 3-9 & 3 \\
 1-3 & 3 \\
 1-1 & \hline
 & 2 \cdot 3 \cdot 3 = 18
 \end{array}$$

R003)

$$40 < M(3) < 60 \Rightarrow \{42, 45, 48, 51, 54, 57\}$$

$$40 < M(8) < 60 \Rightarrow \{48, 56\}$$

$$R: 48$$

R004) a)

$$B = \{ 3, 6, 9, 12, \underline{15}, 18, 21, 24, 27, \underline{30}, 33 \}$$

$$O = \{ 5, 10, \underline{15}, \underline{20}, 25, 30 \}$$

$$P = \{ 4, 8, 12, 16, 20, 24, 28 \}$$

R: 2

R004) b)

$$B = \{ 3, 6, 9, \underline{12}, 15, 18, 21, \underline{24}, 27, 30, 33 \}$$

$$O = \{ 5, 10, 15, 20, 25, 30 \}$$

$$P = \{ 4, 8, \underline{12}, 16, 20, \underline{24}, 28 \}$$

R: 2

R004) c)

$$B = \{ 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33 \}$$

$$O = \{ 5, 10, 15, \underline{20}, 25, 30 \}$$

$$P = \{ 4, 8, 12, 16, \underline{20}, 24, 28 \}$$

R: 1 //

O 2 P

R004) d)

$$B = \{ 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33 \}$$

$$O = \{ 5, 10, 15, 20, 25, 30 \}$$

$$P = \{ 4, 8, 12, 16, 20, 24, 28 \}$$

R: 0 //

R005)

$$D = \{4, 8, 12, 16, \underline{20}, 24, 28, 32, \dots\}$$

$$M = \{5, 10, 15, \underline{20}, 25, 30, 35, \dots\}$$

R: 20 min.

R006) a)

$$a = \underline{2^3} \cdot 3^2 \quad m m c(a, b) = 2^3 \cdot 5$$

$$b = 2^2 \cdot \underline{5} \quad = 8 \cdot 5$$

$$c = 2 \cdot \underline{3^3} \quad = 40$$

R006) b)

$$a = \underline{2^3} \cdot 3^2 \quad m m c(a, c) = 2^3 \cdot 3^3$$

$$b = 2^2 \cdot 5 \quad = 8 \cdot 27$$

$$c = 2 \cdot \underline{3^3} \quad = 216$$

R006) c)

$$a = 2^3 \cdot 3^2 \quad m m c(b, c) = 2^2 \cdot 3^2$$

$$b = \underline{2^2} \cdot \underline{5} \quad = 4 \cdot 9$$

$$c = 2 \cdot \underline{3^3} \quad = 36$$

R006) d)

$$a = \underline{2^3} \cdot 3^2 \quad m m c(a, b, c) = 2^3 \cdot 3^3 \cdot 5$$

$$b = 2^2 \cdot \underline{5} \quad = 8 \cdot 27 \cdot 5$$

$$c = 2 \cdot \underline{3^3} \quad = 1080$$

R007) a)

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

$$\begin{array}{r|l} 30 & 2 \\ 15 & 3 \\ 5 & 5 \\ \hline 1 & 2.3.5 \\ \hline \end{array}$$

$$\begin{aligned} \text{mmc}(25,30) &= 5^2 \cdot 2 \cdot 3 = \\ &= 25 \cdot 6 = \\ &= 150 \end{aligned}$$

$$\begin{array}{r|l} 25 - 30 & 2 \\ 25 - 15 & 3 \\ 25 - 5 & 5 \\ 5 - 1 & 5 \\ 1 - 1 & 2.3.5^2 = 150 \end{array}$$

R007) b)

$$\begin{array}{r|l} 22 & 2 \\ 11 & 11 \\ \hline 1 & 2.11 \\ \hline \end{array}$$

$$\begin{array}{r|l} 99 & 3 \\ 33 & 3 \\ 11 & 11 \\ \hline 1 & 3^2.11 \\ \hline \end{array}$$

$$\begin{aligned} \text{mmc}(22,99) &= 2 \cdot 11 \cdot 3^2 \\ &= 2 \cdot 11 \cdot 9 \\ &= 198 \end{aligned}$$

$$\begin{array}{r|l} 22 - 99 & 2 \\ 11 - 99 & 3 \\ 11 - 33 & 3 \\ 11 - 11 & 11 \\ 1 - 1 & 2.3^2.11 = 198 \end{array}$$

R007) c)

$$\begin{array}{r|l}
 36 & 2 \\
 18 & 2 \\
 9 & 3 \\
 3 & 3 \\
 1 & 1
 \end{array}
 \quad
 \begin{array}{l}
 2^2 \cdot \underline{3^2}
 \end{array}$$

$$\begin{array}{r|l}
 48 & 2 \\
 24 & 2 \\
 12 & 2 \\
 6 & 2 \\
 3 & 3 \\
 1 & 1
 \end{array}
 \quad
 \begin{array}{l}
 \underline{2^4} \cdot 3
 \end{array}$$

$$\begin{aligned}
 \text{mmc}(36, 48) &= 3^2 \cdot 2^4 \\
 &= 9 \cdot 16 \\
 &= 144
 \end{aligned}$$

ou

$$\begin{array}{r|l}
 36 - 48 & 2 \\
 18 - 24 & 2 \\
 9 - 12 & 2 \\
 9 - 6 & 2 \\
 9 - 3 & 3 \\
 3 - 1 & 3 \\
 1 - 1 & 1
 \end{array}
 \quad
 \begin{array}{l}
 2^4 \cdot 3^2 = 144
 \end{array}$$

R007) d)

$$\begin{array}{r|l}
 150 & 2 \\
 75 & 3 \\
 25 & 5 \\
 5 & 5 \\
 1 & \\
 \hline
 & 2 \cdot 3 \cdot 5^2
 \end{array}$$

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

$$\begin{array}{r|l}
 75 & 3 \\
 25 & 5 \\
 5 & 5 \\
 1 & \\
 \hline
 & 3 \cdot 5^2
 \end{array}$$

$$mmc(150, 60, 75)$$

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

$$4 \cdot 3 \cdot 25 = 300$$

OU

$$\begin{array}{r|l}
 150 - 60 - 75 & 2 \\
 75 - 30 - 75 & 2 \\
 75 - 15 - 75 & 3 \\
 25 - 5 - 25 & 5 \\
 5 - 1 - 5 & 5 \\
 1 - 1 - 1 & \\
 \hline
 & 2^2 \cdot 3 \cdot 5^2 = 300
 \end{array}$$

R008)

$$\begin{array}{r|l}
 6 - 8 & 2 \\
 3 - 4 & 2 \\
 3 - 2 & 2 \\
 3 - 1 & 3 \\
 1 - 1 & \\
 \hline
 & 2^3 \cdot 3 = 24 //
 \end{array}$$

R010) a)

$$\begin{array}{r|l}
 40 - 60 & 2 \\
 20 - 30 & 2 \\
 10 - 15 & 2 \\
 5 - 15 & 3 \\
 5 - 5 & 5 \\
 1 - 1 & \\
 \hline
 & 2^3 \cdot 3 \cdot 5 = 120 //
 \end{array}$$

R010) b)

$$\begin{array}{r|l}
 45-120 & 2 \\
 45-60 & 2 \\
 45-30 & 2 \\
 45-15 & 3 \\
 15-5 & 3 \\
 5-5 & 5 \\
 1-1 & 5 \\
 \hline
 & 2^3 \cdot 3^2 \cdot 5 = 360
 \end{array}$$

R010) c)

$$\begin{array}{r|l}
 72-45-54 & 2 \\
 36-45-27 & 2 \\
 18-45-27 & 2 \\
 9-45-27 & 3 \\
 3-15-9 & 3 \\
 1-5-3 & 3 \\
 1-5-1 & 5 \\
 1-1-1 & 5 \\
 \hline
 & 2^3 \cdot 3^3 \cdot 5 = 1080
 \end{array}$$

R010) d)

$$\begin{array}{r|l}
 15-20-25 & 2 \\
 15-10-25 & 2 \\
 15-5-25 & 3 \\
 5-5-25 & 5 \\
 1-1-5 & 5 \\
 1-1-1 & 5 \\
 \hline
 & 2^2 \cdot 3 \cdot 5^2 = 300
 \end{array}$$

R011)

$$\begin{array}{r|l}
 3-6-8 & 2 \\
 3-3-4 & 2 \\
 3-3-2 & 2 \\
 3-3-1 & 3 \\
 1-1-1 & \hline
 & 2^3 \cdot 3 = 24
 \end{array}$$

R: 24 HORAS

R012)

$$\begin{array}{r|l}
 4-6 & 2 \\
 2-3 & 2 \\
 1-3 & 3 \\
 1-1 & \hline
 & 2^2 \cdot 3 = 12
 \end{array}$$



R: 12