

$$C \textcircled{1} \quad m = \frac{-4+4}{-4-2} = \frac{0}{-6} = 0 \quad (C)$$

$$C \textcircled{2} \quad \begin{aligned} 18x - 3y &= -162 & m &= 6 & (C) \\ -3y &= -18x - 162 & b &= 54 \\ y &= 6x + 54 \end{aligned}$$

$$D \textcircled{3} \quad m = \frac{-2-3}{-2+5} = \frac{-5}{3} \quad m = -\frac{5}{3} \quad (D)$$

$$A \textcircled{4} \quad \text{perpendicular to } x\text{-axis} = -\frac{1}{0} = \text{undefined} \quad (A)$$

$$A \textcircled{5} \quad \begin{aligned} 4(x-3) + 2y &= 8x+2 \\ 4x-12+2y &= 8x+2 \\ 2y &= 4x+14 \\ y &= 2x+7 & (A) \end{aligned}$$

$$D \textcircled{6} \quad \begin{aligned} -8x - 6y &= 3 \\ -6y &= 8x+3 \\ y &= -\frac{4}{3}x - \frac{1}{2} & (D) \end{aligned}$$

$$\begin{aligned} D \text{ ① } 5x + 2y &= 2 & m &= -\frac{5}{2} \\ 2y &= -5x + 2 \\ y &= \frac{-5x + 2}{2} & m &= \frac{2}{5} \quad \text{①} \end{aligned}$$

$$\begin{aligned} A \text{ ⑧ } 32x^4y^2 - 16xy^3 + 48x^5y^3 \\ 16xy^2(2x^3 - y^2 + 3x^4y) \quad \text{①} \end{aligned}$$

$$B \text{ ⑨ } 4x^2 + 5x - 6 \quad \text{Hard Trinomial} \quad \text{①}$$

D ⑩ $14x^2 - 25$
 $(12x-5)(12x+5)$ ①

B ⑪ $4x^2 + 5x - 6$ $\frac{8}{4} + \frac{3}{4} = 5$
 $(x+\frac{8}{4})(x-\frac{3}{4})$ $8x - 3 = -24$
 $(x+2)(4x-3)$ ③

C ⑫ $14a^2b^5c^3 - 21ab^3c^2 + 35ac^5$
 $7ac^3(2abc^2 - 3b^3 + 5c^2)$ ④

D ⑬ $x^2 + 4x - 45$
 $(x+9)(x-5)$ ①

C ⑭ $\frac{2(2x-3y)(3x-y)}{(4x-6y)(3x-y)}$
 $\frac{2x^2 - 4xy - 18xy + 6y^2}{12x^2 - 22xy + 6y^2}$ ④

$$\begin{aligned} \text{C } 15) & 3(x^2 - 2x - 1) + 3(5x - 4 - 2x^2) \\ & 3x^2 - 6x - 3 + 15x - 12 - 6x^2 \\ & -3x^2 + 9x - 15 \quad \text{C} \end{aligned}$$

$$\begin{aligned} \text{A } 16) \text{ Allant: } & y = 0.02x + 26 = 0.02(500) + 26 = 10 + 26 = 36 \\ \text{Rogers: } & y = 0x + 40 = 0(500) + 40 = 0 + 40 = 40 \end{aligned}$$

$$\begin{aligned} \text{D } 17) & 0.02x + 26 = 40 \\ & 0.02x = 14 \\ & x = 700 \quad \text{D} \end{aligned}$$

$$\text{C } 18) \text{ Allant: } y = 0.02x + 26 \quad \text{C}$$

$$\text{C } 19) \text{ From graph: } (1, 6) \quad \text{C}$$

A ⑩ $m = \frac{2}{3}$ $y - y_1 = m(x - x_1)$
 $x_1 = -2$ $y - 5 = \frac{2}{3}(x + 2)$
 $y_1 = 5$ $3y - 15 = 2(x + 2)$
 $3y - 15 = 2x + 4$
 $0 = 2x - 3y + 19$ (A)

* ⑪ vertical slope = $\frac{1}{0}$ $y + 7 = \frac{1}{0}(x + 6)$
 $x_1 = -6$ $\frac{y+7}{1} = \frac{x+6}{0} \rightarrow x+6=0$ (D)
 $y_1 = -7$

A ⑫ $\frac{1}{3} = \frac{k+1}{6+2}$ B ⑬ $m = \frac{0+2}{4-0} = \frac{2}{4} = \frac{1}{2}$
 $\frac{1}{3} = \frac{k+1}{8}$ (ii) $y - 0 = \frac{1}{2}(x - 4)$
 $3k + 3 = 8$ $y = \frac{1}{2}x - 2$ (B)
 $3k = 5$
 $k = \frac{5}{3}$ (A)

$$B \textcircled{24} \sqrt[5]{64} = \sqrt[5]{2 \times 2 \times 2 \times 2 \times 2} = 2 \textcircled{B}$$

$$D \textcircled{25} \sqrt[3]{54} = \sqrt[3]{2 \times 3 \times 3 \times 3} = 3 \textcircled{D}$$

$$D \textcircled{26} \left(\frac{1}{27}\right)^{-2/3} = (27)^{2/3} = (\sqrt[3]{27})^2 = (3)^2 = 9 \textcircled{D}$$

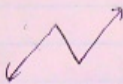
$$D \textcircled{27} (\sqrt{13})^2 = 13^{1/2 \times 2} = 13 \textcircled{D}$$

$$A \textcircled{28} \left(\frac{x^3 y^{-4}}{x^{-2} y^3}\right)^{-2} = \frac{x^{-6} y^8}{x^{-4} y^6} = x^3 y^{-1} = \frac{x^3}{y} \textcircled{A}$$

A (21) $380 \rightarrow 2 \times 2 \times 5 \times 19 \rightarrow 2^2 \times 5 \times 19$ (A)

(22) From Graph fastest from D to E or DE (E)

C (23) From Graph stopped from C to D or CD (C)

A (24) From Graph  is a function (A)

C (25) $9x + 5y = 15$ $18x + 10y = 30$ $9(0) + 5y = 15$
 $4x + 10y = 30$ $\rightarrow \frac{4x + 10y = 30}{14x = 0}$ $5y = 15$
 $x = 0$ $x = 0$ $y = 3$ (C)
 $(0, 3)$

A (26) $x - 3y = 1$ $x = 1 + 3y$ $x = 1 + 3(-2)$
 $2x + 4y = -18$ $2x + 4y = -18$ $x = 1 - 6$
 $2(1 + 3y) + 4y = -18$ $2 + 6y + 4y = -18$ $x = -5$
 $2 + 6y + 4y = -18$ $10y = -20$ $(-5, -2)$ (A)
 $10y = -20$
 $y = -2$

$$\begin{array}{l}
 \text{C } \textcircled{35} \text{ P: } 6h + 12g = 198 \\
 \text{D: } 12h + 6g = 198 \\
 \begin{array}{l}
 -12h - 24g = -396 \\
 12h + 6g = 198 \\
 \hline
 -18g = -198 \\
 g = 11 \\
 \end{array} \\
 \left. \begin{array}{l}
 6(11) + 12g = 198 \\
 66 + 12g = 198 \\
 12g = 132 \\
 g = 11
 \end{array} \right\} \textcircled{C}
 \end{array}$$

A $\textcircled{36}$ From Graph \textcircled{A}

$$\begin{array}{l}
 \text{A } \textcircled{37} \quad d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\
 d = \sqrt{(8 - 2)^2 + (-2 - 6)^2} \\
 d = \sqrt{36 + 64} \\
 d = \sqrt{100} \\
 d = 10 \quad \textcircled{A}
 \end{array}$$

$$\text{B } \textcircled{38} \quad M = \left[\frac{10+4}{2}, \frac{3+7}{2} \right] = (7, 5) \quad \textcircled{B}$$

C $\textcircled{39}$ From graph R: $\{y | y \geq -3, y \in \mathbb{R}\}$

A $\textcircled{40}$ From graph D: $\{x \geq -8, x \in \mathbb{R}\}$