

TINGKATAN 3

BAB 9

Praktis Sumatif

Bahagian A

$$1 \left(\frac{x}{3} - \frac{3y}{5} = 1 \right) \times 15$$

$$5x - 9y = 15$$

$$9y = 5x - 15$$

$$y = \frac{5}{9}x - \frac{15}{9}$$

$$\text{Kecerunan} = \frac{5}{9}$$

Jawapan: A

$$2 \quad 9x + 6y = k$$

$$6y = -9x + k$$

$$y = -\frac{3}{2}x + \frac{1}{6}k$$

$$\therefore c = \frac{1}{6}k$$

$$\text{Diberi } c = \frac{3}{2},$$

$$\frac{1}{6}k = \frac{3}{2}$$

$$k = 9$$

Jawapan: D

$$3 \quad 4x + 5y = 20$$

A: $4(5) + 5(0) = 20$
 B: $4(-10) + 5(-4) = -60 \neq 20$

Jawapan: B

$$4 \quad \frac{x}{4} + \frac{y}{(-2)} = 1$$

$$\frac{x}{4} - \frac{y}{2} = 1$$

$$\text{Darab dengan 4,}$$

$$x - 2y = 4$$

Jawapan: C

$$5 \quad m = \frac{-8-6}{4-0} = -\frac{7}{2}$$

$$y - 6 = -\frac{7}{2}x$$

$$2y - 12 = -7x$$

$$2y + 7x = 12$$

Jawapan: D

$$6 \quad 8y - 6x = 9$$

$$8y = 6x + 9$$

$$y = \frac{3}{4}x + \frac{9}{8}$$

$$\therefore m = \frac{3}{4}$$

$$y - 5 = \frac{3}{4}(x - 8)$$

$$4y - 20 = 3x - 24$$

$$3x - 4y = 4$$

Jawapan: B

7 Jawapan: B

$$8 \quad \frac{y}{2p} - x = 9$$

$$y - 2px = 18p$$

$$y = 2px + 18p$$

$$m_1 = 2p$$

$$y = (10 - 3p)x - 4$$

$$m_2 = 10 - 3p$$

$$m_1 = m_2$$

$$2p = 10 - 3p$$

$$5p = 10$$

$$p = 2$$

Jawapan: B

$$9 \quad y = -3 \dots\dots\dots \textcircled{1}$$

$$5x - 3y = 14 \dots\dots\dots \textcircled{2}$$

Gantikan $\textcircled{1}$ ke dalam $\textcircled{2}$:

$$5x - 3(-3) = 14$$

$$5x = 5$$

$$5x = 14 - 9$$

$$x = 1$$

\therefore Titik persilangan ialah $(1, -3)$.

Jawapan: C

$$10 \quad y - 2 = 3x$$

$$y = 3x + 2 \dots\dots\dots \textcircled{1}$$

$$y = -5x + 18 \dots\dots\dots \textcircled{2}$$

Gantikan $\textcircled{1}$ ke dalam $\textcircled{2}$:

$$3x + 2 = -5x + 18$$

$$8x = 16$$

$$x = 2$$

Gantikan $x = 2$ ke dalam $\textcircled{2}$:

$$y = -5(2) + 18$$

$$= 8$$

\therefore Titik persilangan ialah $(2, 8)$.

Jawapan: C

Bahagian B

$$1 \quad (a) \quad 9x + 3y = 8$$

$$3y = -9x + 8$$

$$y = -3x + \frac{8}{3}$$

$$\text{Kecerunan} = -3$$

(b) Pintasan- x apabila $y = 0$.

$$9x + 3(0) = 8$$

$$9x = 8$$

$$x = \frac{8}{9}$$

(c) $(-2, k)$ $x = -2, y = k$

$$9(-2) + 3k = 8$$

$$-18 + 3k = 8$$

$$3k = 8 - 18$$

$$k = 8 - \frac{18}{3}$$

(d) $(h, 3)$ $x = h, y = 3$

$$9h + 3(3) = 8$$

$$9h = 8 - 9$$

$$h = -\frac{1}{9}$$

$$2 \quad y = \frac{1}{2}x + 3; \text{Kecerunan, } m = \frac{1}{2}$$

$$2x + 4y = 7$$

$$m = -\frac{1}{2}$$

$$6y - 3x + 5 = 0$$

$$m = \frac{1}{2} \quad \boxed{\checkmark}$$

$$\frac{4x}{3} = \frac{8y}{3} + 1$$

$$m = \frac{1}{2} \quad \boxed{\checkmark}$$

$$\frac{x}{12} - \frac{y}{12} = 1$$

$$m = 1$$

$$x - 2y = 11$$

$$m = \frac{1}{2} \quad \boxed{\checkmark}$$

$$10y = 5x - 8$$

$$m = \frac{1}{2} \quad \boxed{\checkmark}$$

Bahagian C

1 (a) Kecerunan $OD = \frac{6-0}{4-0} = \frac{3}{2}$

Persamaan $COD: y = \frac{3}{2}x$

(b) $-\frac{k}{6} = \frac{3}{2}$

$$k = \frac{3}{2}(-6) \\ = -9$$

(c) Persamaan $EF: y = \frac{3}{2}x - 9$

(d) Gantikan $m = \frac{3}{2}, x = -2$ dan $y = 3$ ke dalam $y = mx + c$.

$$3 = \frac{3}{2}(-2) + c$$

$$c = 3 + 3 = 6$$

Persamaan $AB: y = \frac{3}{2}x + 6$

(e) $y = \frac{3}{2}x + 6$

Gantikan $x = 0$,

\therefore Pintasan- y ialah 6.

Gantikan $y = 0$,

$$\frac{3}{2}x = -6$$

$$x = \frac{2}{3}(-6)$$

$$= -4$$

\therefore Pintasan- x ialah -4 .