

TINGKATAN 3

BAB 9

Praktis Sumatif

Bahagian A

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

$$5x - 9y = 15$$

$$9y = 5x - 15$$

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

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

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

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

$$\text{A: } 4(5) + 5(0) = 20$$

$$\text{B: } 4(-10) + 5(-4) = -60 \neq 20$$

Jawapan: B

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

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

Darab dengan 4,

$$x - 2y = 4$$

Jawapan: C

$$5 \quad \text{Gantikan } m = \frac{1}{2}, x = 4 \text{ dan } y = -3 \text{ ke dalam } y = mx + c.$$

$$-3 = \frac{1}{2}(4) + c$$

$$c = -5$$

$$\therefore y = \frac{1}{2}x - 5$$

Jawapan: D

$$6 \quad m = \frac{6-0}{1-(-2)}$$

$$= 2$$

Gantikan $m = 2, x = -2$ dan $y = 0$ ke dalam $y = mx + c$.

$$0 = 2(-2) + c$$

$$c = 4$$

$$\therefore y = 2x + 4$$

Jawapan: B

$$7 \quad \text{Gantikan } m = 2, x = 4 \text{ dan } y = -1 \text{ ke dalam } 2x - 3y - 11 = 0.$$

$$\text{Sebelah kiri} = 2(4) - 3(-1) - 11$$

$$= 0$$

$$= \text{Sebelah kanan}$$

Jawapan: B

$$8 \quad \text{Gantikan } x = \frac{4}{a} \text{ dan } y = 5 \text{ ke dalam } x - \frac{y}{a} + 4 = 0.$$

$$\frac{4}{a} - \frac{5}{a} + 4 = 0$$

$$-\frac{1}{a} + 4 = 0$$

$$a = \frac{1}{4}$$

Jawapan: A

$$9 \quad y = -3 \dots\dots\dots ①$$

$$5x - 3y = 14 \dots\dots\dots ②$$

Gantikan ① ke dalam ②:

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

$$5x = 5$$

$$5x = 14 - 9$$

$$x = 1$$

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

Jawapan: C

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

$$y = 3x + 2 \dots\dots\dots ①$$

$$y = -5x + 18 \dots\dots\dots ②$$

Gantikan ① ke dalam ②:

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

$$8x = 16$$

$$x = 2$$

Gantikan $x = 2$ ke dalam 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) $(-2, k) x = -2, y = k$

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

$$-18 + 3k = 8$$

$$3k = 8 - 18$$

$$k = 8 - \frac{2}{3}$$

(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 .