

TINGKATAN 2

BAB 2

Praktis Sumatif

Bahagian A

$$\begin{aligned} 1 \text{ Luas} &= \frac{1}{2}(x+2)(2x+4x-5) \\ &= \frac{1}{2}(x+2)(6x-5) \\ &= \frac{1}{2}(6x^2+7x-10) \end{aligned}$$

Jawapan: A

$$\begin{aligned} 2 \quad (2y+3)(y-4) + (7y-12) &= (2y^2-5y-12) + 7y-12 \\ &= 2y^2+2y-24 \\ &= 2(y^2+y-12) \\ &= 2(y+4)(y-3) \end{aligned}$$

Jawapan: C

$$\begin{aligned} 3 \quad (a+b)^2 &= 24 \\ a^2+b^2+2ab &= 24 \\ a^2+b^2+2(3) &= 24 \\ a^2+b^2 &= 18 \\ (a-b)^2 &= a^2+b^2-2ab \\ &= 18-2(3) \\ &= 12 \end{aligned}$$

Jawapan: D

$$\begin{aligned} 4 \quad \frac{1}{p-1} + \frac{3-p}{5p} &= \frac{5p+(p-1)(3-p)}{5p(p-1)} \\ &= \frac{5p+(4p-3-p^2)}{5p(p-1)} \\ &= \frac{9p-3-p^2}{5p(p-1)} \end{aligned}$$

Jawapan: B

$$\begin{aligned} 5 \quad \frac{b+5}{b-5} - \frac{3}{5-b} &= \frac{b+5+3}{b-5} \\ &= \frac{b+8}{b-5} \end{aligned}$$

Jawapan: A

$$\begin{aligned} 6 \text{ Jarak} &= (6x-18) \times \frac{1}{2}(x+3) \\ &= 3(x-3)(x+3) \\ &= 3x^2-27 \end{aligned}$$

Jawapan: D

$$\begin{aligned} 7 \quad (9-b^2) \times \frac{b}{4b-12} &= (3+b)(3-b) \times \frac{b}{4(b-3)} \\ &= -(b-3)(b+3) \times \frac{b}{4(b-3)} \\ &= -\frac{b(b+3)}{4} \\ &= -\frac{b^2+3b}{4} \end{aligned}$$

Jawapan: D

$$\begin{aligned} 8 \quad \frac{2h-k}{h^2} \div \frac{4h^2-k^2}{hk} &= \frac{2h-k}{h^2} \times \frac{hk}{4h^2-k^2} \\ &= \frac{2h-k}{h^2} \times \frac{hk}{(2h+k)(2h-k)} \\ &= \frac{k}{h(2h+k)} \\ &= \frac{k}{2h^2+hk} \end{aligned}$$

Jawapan: A

$$\begin{aligned} 9 \quad \frac{(x+2y)^2}{2x-2y} \times \frac{4}{(x+2y)} + \frac{x}{x-y} \\ &= \frac{4(x+2y)}{2(x-y)} + \frac{x}{x-y} \\ &= \frac{2(x+2y)+x}{(x-y)} \\ &= \frac{2x+4y+x}{x-y} \\ &= \frac{3x+4y}{x-y} \end{aligned}$$

Jawapan: C

Bahagian B

$$\begin{aligned} 1 \quad (a) \quad (i) \quad m(m-3) &= m^2-3m \\ (ii) \quad x(x-1)(x+1) &= x(x^2-1) \\ &= x^3-x \\ (b) \quad (i) \quad x(x+y)-2y(x+y) &= (x-2y)(x+y) \\ (ii) \quad x^2-xy-6y^2 &= (x^2+2xy)+(-3xy-6y^2) \\ &= x(x+2y)-3y(x+2y) \\ &= (x+2y)(x-3y) \end{aligned}$$

$$\begin{aligned} 2 \quad (a) \quad \frac{1}{2m} - \frac{1}{3m} &= \frac{3}{6m} - \frac{2}{6m} \\ &= \frac{1}{6m} \\ (b) \quad \frac{2}{a} + \frac{3}{b} &= \frac{2b}{ab} + \frac{3a}{ab} \\ &= \frac{2b+3a}{ab} \\ (c) \quad \frac{4}{x-y} + \frac{3}{y-x} &= \frac{1}{x-y} \\ (d) \quad \frac{a+b}{2ab^3} \times \frac{a^3b}{3a+3b} &= \frac{(a+b)a^3b}{2ab^3(3a+3b)} \\ &= \frac{(a+b)a^2b}{2ab^3(3a+3b)} \\ &= \frac{(a+b)a^2}{2ab^2 \times 3(a+b)} \\ &= \frac{a^2}{6ab^2} \end{aligned}$$

Bahagian C

$$\begin{aligned} 1 \quad (a) \quad \frac{4e+12}{e^2-4} \div \frac{e+3}{e+2} &= \frac{4(e+3)}{(e-2)(e+2)} \times \frac{e+2}{e+3} \\ &= \frac{4}{e-2} \\ (b) \quad \frac{5}{2a} - \frac{3-4b}{6a} &= \frac{15-(3-4b)}{6a} \\ &= \frac{15-3+4b}{6a} \\ &= \frac{12+4b}{6a} \\ &= \frac{2(6+2b)}{6a} \\ &= \frac{6+2b}{3a} \\ (c) \quad \frac{30}{5x} - \frac{10}{3x+5} &= \frac{6}{x} - \frac{10}{3x+5} \\ &= \frac{6(3x+5)-10x}{x(3x+5)} \\ &= \frac{18x+30-10x}{x(3x+5)} \\ &= \frac{8x+30}{x(3x+5)} \end{aligned}$$