TINGKATAN 2

BAB 3

Praktis Sumatif

Bahagian A

1. Jawapan: **B**

2. Jawapan: **D**

3. $3a + 6b = 180°$
   $a + 2b = 60°$
   Jawapan: **C**

4. 6 bulan → kenaikan RM60
   1 tahun → kenaikan RM120
   T tahun → kenaikan RM120T
   $\therefore P = K + 120T$
   Jawapan: **B**

5. Jawapan: **A**

6. $a = \dfrac{1}{3}b + 5$
   $\dfrac{1}{3}b = a - 5$
   $b = 3a - 15$
   Jawapan: **C**

7. $k = \dfrac{m^2 - 9}{4}$
   $m^2 - 9 = 4k$
   $m^2 = 4k + 9$
   $m = \sqrt{4k + 9}$
   Jawapan: **A**

8. $h = 4\sqrt{\dfrac{2x}{3}}$
   $\dfrac{2x}{3} = \left(\dfrac{h}{4}\right)^2$
   $2x = \dfrac{3h^2}{16}$
   $x = \dfrac{3h^2}{32}$
   Jawapan: **B**

9. $d = \dfrac{4e^2}{3f}$
   Gantikan $e = -2$ dan $f = 8$.
   $d = \dfrac{4(-2)^2}{3(8)}$
   $= \dfrac{16}{24}$
   $= \dfrac{2}{3}$
   Jawapan: **C**

10. $y = \dfrac{hk^2 - 2}{3h + 2}$
    Gantikan $y = 2$ dan $k = 3$.
    $2 = \dfrac{h(3)^2 - 2}{3h + 2}$
    $6h + 4 = 9h - 2$
    $4 + 2 = 9h - 6h$
    $3h = 6$
    $h = \dfrac{6}{3}$
    $= 2$
    Jawapan: **A**

Bahagian B

1. (a) $p + 2q - 2r + \dfrac{s}{2} = 0$
   $p = -2q + 2r - \dfrac{s}{2}$
   Benar

   (b) $p + 2q - 2r + \dfrac{s}{2} = 0$
   $q = \dfrac{-2p + 4r - s}{4}$
   Palsu

   (c) $p + 2q - 2r + \dfrac{s}{2} = 0$
   $r = \dfrac{2p + 4r + s}{-4}$
   Palsu

   (d) $p + 2q - 2r + \dfrac{s}{2} = 0$
   $s = -2p - 4q + r$
   Benar

2. $k = \sqrt{\dfrac{p - q}{5}}$
   $k^2 = \dfrac{p - q}{5}$
   $5k^2 = p - q$

   (a) $p = 5k^2 + q$

   (b) $q = p - 5k^2$

   (c) $q = p - 5k^2$
   Gantikan $p = 18$ dan $k = 2$
   $q = 18 - 5(2)^2$
   $= 18 - 20$
   $= -2$

   (d) $q = p - 5k^2$
   Gantikan $k = -3$ dan $q = -8$
   $-8 = p - 5(-3)^2$
   $45 - 8 = p$
   $p = 37$

Bahagian C

1. (a) (i) $x = \dfrac{8k}{h + k}$
   $x(h + k) = 8k$
   $hx + kx = 8k$
   $hx = 8k - kx$
   $h = \dfrac{8k - kx}{x}$

   (ii) $x = \dfrac{8k}{h + x}$
   $x(h + k) = 8k$
   $hx + kx = 8k$
   $hx = 8k - kx$
   $hx = k(8 - x)$
   $k = \dfrac{hk}{8 - x}$

   (b) (i) Luas segi empat tepat $ABDE$
   $= 9 \times 16 = 144 \text{ cm}^2$
   Luas segi tiga $ABC = \dfrac{1}{2} \times x \times 9$
   $= \dfrac{9x}{2} \text{ cm}^2$
   Luas trapezium $DEFG$
   $= \dfrac{1}{2} \times 4 \times (x + 9)$
   $= 2x + 18 \text{ cm}^2$
   Luas kawasan berlorek,
   $A = 144 - \dfrac{9x}{2} - 2x - 18$
   $A = 126 - \dfrac{13x}{2} \text{ cm}^2$

   (ii) $A = 126 - \dfrac{13(5)}{2}$
   $= 126 - \dfrac{65}{2}$
   $= 126 - 32\dfrac{1}{2}$
   $= 93\dfrac{1}{2} \text{ cm}^2$

   (iii) $87 = 126 - \dfrac{13x}{2}$
   $\dfrac{13x}{2} = 126 - 87$
   $13x = 39 \times 2$
   $x = 6 \text{ cm}^2$