

## TINGKATAN 2

### BAB 3

#### Praktis Sumatif

#### Bahagian A

1 Jawapan: B

2 Jawapan: D

3  $3a + 6b = 180^\circ$   
 $a + 2b = 60^\circ$   
 Jawapan: C

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

5  $3h + k = 2 - hk$   
 $3h + hk = 2 - k$   
 $h(3 + k) = 2 - k$   
 $h = \frac{2 - k}{3 + k}$   
 Jawapan: C

6  $3x = \frac{7 + 2y}{5y}$   
 $15xy = 7 + 2y$   
 $15xy - 2y = 7$   
 $y(15x - 2) = 7$   
 $y = \frac{7}{15x - 2}$   
 Jawapan: A

7  $2a = \sqrt{\frac{b^2 - 4}{9}}$   
 Kuasa duakan kedua-dua belah,  
 $4a^2 = \frac{b^2 - 4}{9}$   
 $36a^2 = b^2 - 4$   
 $b^2 = 36a^2 + 4$   
 $b = \sqrt{36a^2 + 4}$   
 $b = \sqrt{4(9a^2 + 1)}$   
 $b = 2\sqrt{9a^2 + 1}$   
 Jawapan: B

8  $\frac{1}{f} = \frac{2}{m} - \frac{1}{n}$   
 $\frac{1}{f} = \frac{2n - m}{mn}$   
 $mn = 2nf - mf$   
 $2nf - mn = mf$   
 $n(2f - m) = mf$   
 $n = \frac{mf}{2f - m}$   
 Jawapan: C

9  $w = \frac{x^2y + 3}{x + y}$   
 $w = 6$  dan  $x = -3$   
 $6 = \frac{9y + 3}{-3 + y}$   
 $-18 + 6y = 9y + 3$   
 $-18 - 3 = 9y - 6y$   
 $3y = -21$   
 $y = -7$   
 Jawapan: A

#### Bahagian B

1 (a)  $p + 2q - 2r + \frac{s}{2} = 0$   
 $p = -2q + 2r - \frac{s}{2}$   
 Benar  
 (b)  $p + 2q - 2r + \frac{s}{2} = 0$   
 $q = \frac{-2p + 4r - s}{4}$   
 Palsu  
 (c)  $p + 2q - 2r + \frac{s}{2} = 0$   
 $r = \frac{2p + 4r + s}{-4}$   
 Palsu  
 (d)  $p + 2q - 2r + \frac{s}{2} = 0$   
 $s = -2p - 4q + r$

Benar  
 2  $k = \sqrt{\frac{p - q}{5}}$   
 $k^2 = \frac{p - q}{5}$   
 $5k^2 = p - q$   
 (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)  $x = \frac{8k}{h + k}$   
 $x(h + k) = 8k$   
 $hx + kx = 8k$   
 $hx = 8k - kx$   
 $h = \frac{8k - kx}{x}$   
 (ii)  $x = \frac{8k}{h + x}$   
 $x(h + k) = 8k$   
 $hx + kx = 8k$   
 $hx = 8k - kx$   
 $hx = k(8 - x)$   
 $k = \frac{hk}{8 - x}$

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

(ii)  $A = 126 - \frac{13(5)}{2}$   
 $= 126 - \frac{65}{2}$   
 $= 126 - 32\frac{1}{2}$   
 $= 93\frac{1}{2} \text{ cm}^2$   
 (iii)  $87 = 126 - \frac{13x}{2}$   
 $\frac{13x}{2} = 126 - 87$   
 $13x = 39 \times 2$   
 $x = 6 \text{ cm}^2$