Jawapan

Bahagian A

1 $P = 3 + \dfrac{4}{6}$

$= 3 + \dfrac{2}{3}$

$= \dfrac{9 + 2}{3}$

$= \dfrac{11}{3}$

Jawapan/*Answer*: **C**

2 A Faktor-faktor perdana bagi 21 ialah 3 dan 7.
   The prime factors of 21 *are* 3 *and* 7.
   $3 + 7 = 10$

B Faktor-faktor perdana bagi 28 ialah 2 dan 7.
   The prime factors of 28 *are* 2 *and* 7.
   $2 + 7 = 9$

C Faktor-faktor perdana bagi 35 ialah 5 dan 7.
   The prime factors of 35 *are* 5 *and* 7.
   $5 + 7 = 12$

D Faktor-faktor perdana bagi 40 ialah 2 dan 5.
   The prime factors of 40 *are* 2 *and* 5.
   $2 + 5 = 7$

Jawapan/*Answer*: **C**

3 Gandaan terkecil bagi 7 yang lebih besar daripada 100 ialah 105.
The smallest multiple of 7 *that is greater than* 100 *is* 105.
$\therefore p = 105$
Gandaan terbesar bagi 13 yang kurang daripada 150 ialah 143.
The largest multiple of 13 *that is less than* 150 *is* 143.
$\therefore q = 143$
$q - p = 143 - 105$
$\qquad = 38$
Jawapan/*Answer*: **A**

4 $\sqrt{4.9} = 2.21$

$\sqrt{490} = \sqrt{4.9 \times 100}$

$= \sqrt{4.9} \times \sqrt{100}$

$= 2.21 \times 10$

$= 221$

$\sqrt{4.9} + \sqrt{490}$

$= 7 + 221$

$= 228$

Jawapan/*Answer*: **D**

5 $\left(1\dfrac{1}{4}\right)^3 - \left(\dfrac{3}{8}\right)^2 = \left(\dfrac{5}{4}\right)^2 - \left(\dfrac{3}{8}\right)^2$

$= \dfrac{125}{64} - \dfrac{9}{64}$

$= \dfrac{116}{64}$

$= \dfrac{29}{16}$

$= 1\dfrac{13}{16}$

Jawapan/*Answer*: **B**

6 $p : q = 8 : 13$

$p : p + q = 8 : 8 + 13$

$p : 147 = 8 : 21$

$\dfrac{p}{147} = \dfrac{8}{21}$

$p = \dfrac{8}{21} \times 147$

$= 56$

Jawapan/*Answer*: **D**

7 A Sebutan serupa/*Like terms*

B Sebutan tak serupa/*Unlike terms*

C Sebutan tak serupa/*Unlike terms*

D Sebutan tak serupa/*Unlike terms*

Jawapan/*Answer*: **A**

8 $7m - 15 = 3(m + 7)$

$7m - 15 = 3m + 21$

$4m = 36$

$m = 9$

Jawapan/*Answer*: **C**
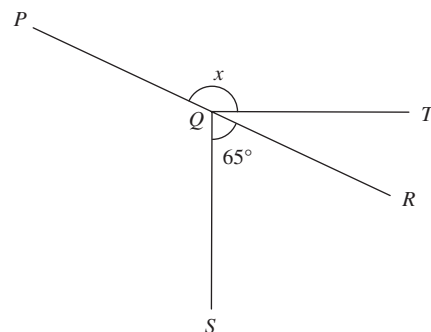
9 $7x < 28$

$x < 4$

$17 > 13 - 2x$

$2x > -4$

$x > -2$

$-2 < x < 4$

Nilai-nilai integer x ialah $\{-1, 0, 1, 2, 3\}$.
The integer values of x *are* $\{-1, 0, 1, 2, 3\}$.
Jawapan/*Answer*: **C**

10

$\angle RQT + 65° = 90°$
$\angle RQT = 25°$
$x + 25° = 180°$
$x = 155°$
Jawapan/*Answer*: **D**

11 $41° + \angle MNP = 68°$
$\angle MNP = 27°$
$(x + 102°) + 27° = 180°$
$x + 129° = 180°$
$x = 51°$
Jawapan/*Answer*: **D**

12 $\angle LGJ = 36°$
$(25° + x) + 36° + 36° = 180°$
$x + 97° = 180°$
$x = 83°$
Jawapan/*Answer*: **C**

13
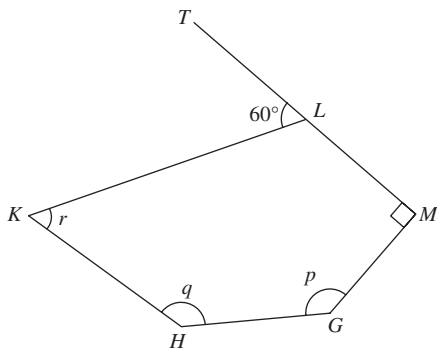
$\angle KLM + 60° = 180°$
$\angle KLM = 120°$
Hasil tambah sudut-sudut pedalaman bagi poligon
Sum of interior angles of polygon
$= (5 - 2) \times 180°$
$= 540°$
$p + q + r + 120° + 90° = 540°$
$p + q + r + 210° = 540°$
$p + q + r = 330°$
Jawapan/*Answer*: **B**

14
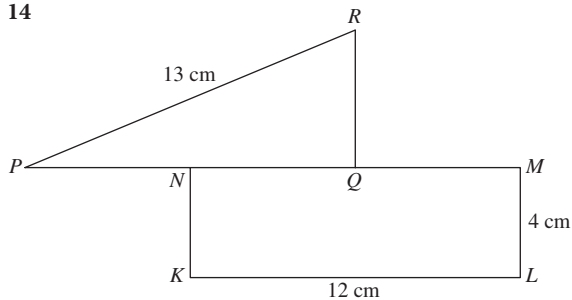
$PN = NQ = QM = 6$ cm
$PQ = 12$ cm
$QR^2 = 13^2 - 12^2$
$= 169 - 144$
$= 25$
$QR = 5$ cm

Perimeter
$= 6 + 4 + 12 + 4 + 6 + 5 + 13$
$= 50$ cm
Jawapan/*Answer*: **B**

15 Luas/*Area of MQRS* $= \dfrac{1}{2} \times (9 + 3) \times 6$
$= 36$ cm^2
$x^2 = 36$
$x = 6$
Panjang sisi segi empat sama
Length of sides of square
$= 6$ cm
Jawapan/*Answer*: **A**

16 A $G = \{1, 2, 5, 10, 25, 50\}$
$G = H$
B $N = \{I, C, O, N\}$
$N = M$
C $\sqrt{10}$ bukan nombor nisbah.
$\sqrt{10}$ *is not a rational number.*
$P \neq Q$
D $T = \{5, 7, 11, 13, 17\}$
$T = W$
Jawapan/*Answer*: **C**

17 $\xi = \{11, 12, 13, \ldots, 29\}$
$P = \{11, 13, 15, 17, 19, 20, 22, 24, 26, 28\}$
$n(\xi) = 19$
$n(P) = 10$
$n(P') = 19 - 10$
$= 9$
Jawapan/*Answer*: **B**

18 A   Palsu/*False*
B   Benar/*True*
C   Palsu/*False*
D   Palsu/*False*
Jawapan/*Answer*: **B**

19
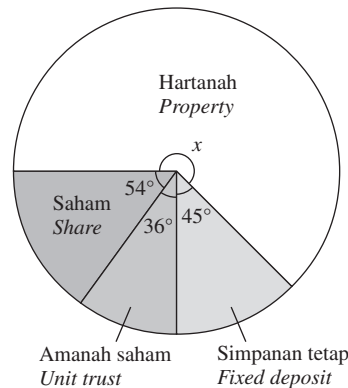
$x + 54° + 36° + 45° = 360°$
$x + 135° = 360°$
$x = 225°$

$\dfrac{H}{80\,000} = \dfrac{225°}{36°}$

$H = \dfrac{225°}{36°} \times 80\,000$

$= 500\,000$
Jawapan/*Answer*: **C**

20
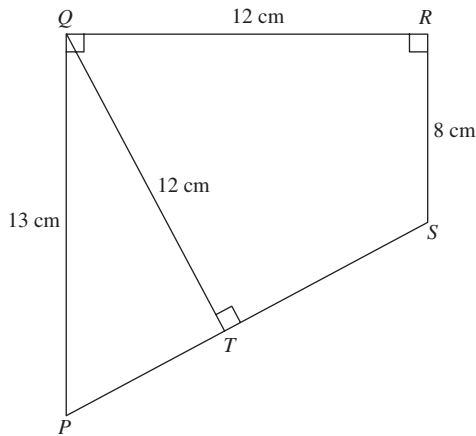
$$PT^2 = 13^2 - 12^2$$
$$= 169 - 144$$
$$= 25$$
$$PT = 5 \text{ cm}$$
$$PS^2 = 12^2 + 5^2$$
$$= 144 + 25$$
$$= 169$$
$$PS = 13 \text{ cm}$$
$$TS = PS - PT$$
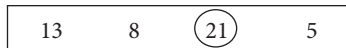$$= 13 - 5$$
$$= 8 \text{ cm}$$
Jawapan/*Answer*: **C**

Bahagian B

1 (a) $\frac{11}{23}$ ☑   1.63 ☑

　　$\sqrt{2}$ ☐   45 ☑

(b) $-10 < -5$

2 $p = 3\frac{1}{4}$, $q = 3.7$, $r = 4.2$, $s = 4\frac{4}{5}$

3 (a) $42 \div 21 = 2$

13	8	(21)	5

(b) $3 : 2\frac{1}{3} = 3 : \frac{7}{3}$

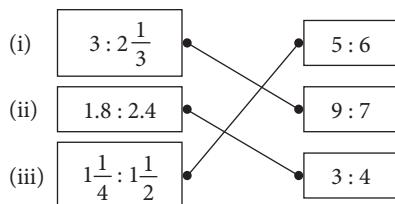$\quad\quad\quad\quad = 3 \times 3 : \frac{7}{3} \times 3$

$\quad\quad\quad\quad = 9 : 7$

$1.8 : 2.4 = 1.8 \div 0.6 : 2.4 \div 0.6$

$\quad\quad\quad\quad = 3 : 4$

$1\frac{1}{4} : 1\frac{1}{2} = \frac{5}{4} \times 4 : \frac{3}{2} \times 4$

$\quad\quad\quad\quad = 5 : 6$

(i) $3 : 2\frac{1}{3}$ ● — ● $5 : 6$

(ii) $1.8 : 2.4$ ● — ● $9 : 7$

(iii) $1\frac{1}{4} : 1\frac{1}{2}$ ● — ● $3 : 4$

4
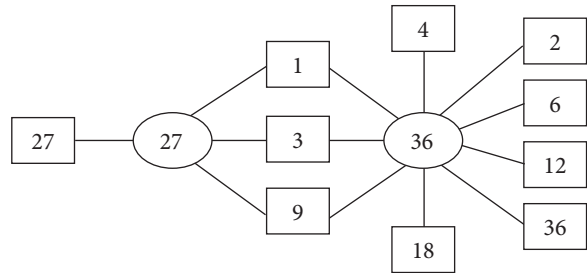
Faktor sepunya terbesar bagi 27 dan 36 ialah 9.
The highest common factor of 27 *and* 36 *is* 9.

5 (a) $6 = 2 \times 3$

$\quad\quad 9 = 3 \times 3$

$\quad\quad 15 = 3 \times 5$

(b) $2 \times 3 \times 3 \times 5 = 90$

Gandaan sepunya terkecil bagi 6, 9 dan 15 ialah 90.
The lowest common multiple of 6, 9 *and* 15 *is* 90.

Bahagian C

1 (a) (i) Pekali p bagi sebutan $-7pq^3r^2$ ialah $-7q^3r^2$.
　　　　The coefficient of p for the term $-7pq^3r^2$ *is* $-7q^3r^2$.

(ii) $a = 3$, $b = 2$, $c = 1$
$$(a + b + c)^2 = (3 + 2 + 1)^2$$
$$= 6^2$$
$$= 36$$

(b) $x + 5y = -4 \ldots\ldots ①$

$2x - y = 14 \ldots\ldots ②$

$② \times 5, \quad 10x - 5y = 70 \ldots\ldots ③$

$① + ③, \quad\quad 11x = 66$

$\quad\quad\quad\quad\quad\quad x = 6$

Daripada/*From* ②, $\quad 2(6) - y = 14$

$\quad\quad\quad\quad\quad\quad 12 - y = 14$

$\quad\quad\quad\quad\quad\quad\quad\quad y = -2$

$\therefore x = 6$, $y = -2$

(c) $x + x + 50° = 180°$

$\quad\quad\quad 2x = 130°$

$\quad\quad\quad\quad x = 65°$

$\angle MNR = 180° - 55°$

$\quad\quad\quad = 125°$

$y + 125° + 85° + 45° = 360°$

$\quad\quad\quad y + 225° = 360°$

$\quad\quad\quad\quad\quad y = 105°$

2 (a) (i) $4k + 3m = 12$ 　[✗]

(ii) $8p = 5 - 2p$ 　[✓]

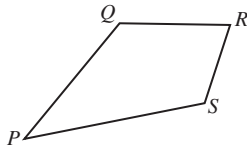(iii) $\frac{1}{2}r + 11 = r$ 　[✓]

(b) (i) $x = y - 17$

(ii) $\quad\quad y \leqslant 20$

$\quad x + 17 \leqslant 20$

$\quad\quad\quad x \leqslant 3$

Nilai terbesar bagi x ialah 3.
The largest value of x is 3.

(c) (i)

(ii) 39°

3 (a) $\sqrt[3]{\dfrac{1}{27}} + \left(1\dfrac{1}{3}\right)^2 = \dfrac{1}{3} + \left(\dfrac{4}{3}\right)^2$

$= \dfrac{1}{3} + \dfrac{16}{9}$

$= \dfrac{19}{9}$

$= 2\dfrac{1}{9}$

(b) $\dfrac{4}{5} \div 1\dfrac{1}{2} - \dfrac{7}{30} \times \left(-\dfrac{9}{14}\right) = \dfrac{4}{5} \div \dfrac{3}{2} + \dfrac{7}{30} \times \dfrac{9}{14}$

$= \dfrac{4}{5} \times \dfrac{2}{3} + \dfrac{1}{10} \times \dfrac{3}{2}$

$= \dfrac{8}{15} + \dfrac{3}{20}$

$= \dfrac{32 + 9}{60}$

$= \dfrac{41}{60}$

(c) $\quad 4x \geqslant x - 12$

$\quad 3x \geqslant -12$

$\quad x \geqslant -4$

$9 + 2x < x + 15$

$2x - x < 15 - 9$

$\quad x < 6$

$\therefore -4 \leqslant x < 6$

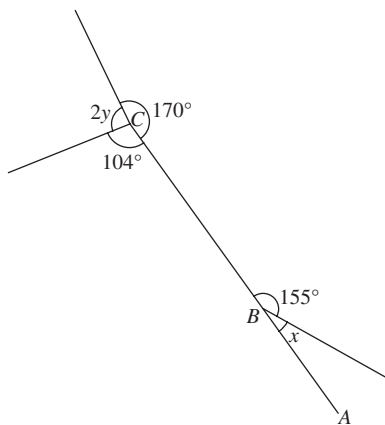**4** (a)
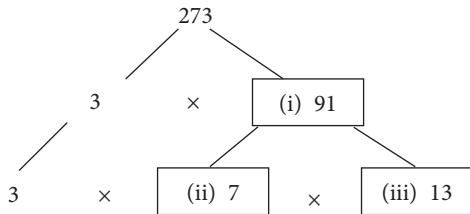
Faktor-faktor perdana bagi 273 ialah 3, 7 dan 13.
The prime factors of 273 *are* 3, 7 *and* 13.

(b) (i) 42 km   (ii) 6

(c)

$x + 155° = 180°$

$x = 25°$

$2y + 104° + 170° = 360°$

$2y + 274° = 360°$

$2y = 86°$

$y = 43°$

5 (a) (i) $24^2 = 576$

$12^2 + 20^2 = 144 + 400$

$= 544$

$24^2 \neq 12^2 + 20^2$

∴ Bukan segi tiga bersudut tegak

∴ *Not a right-angled triangle*

(ii) $\quad 20^2 = 400$

$12^2 + 16^2 = 144 + 256$

$= 400$

$20^2 = 12^2 + 16^2$

∴ Segi tiga bersudut tegak

∴ *A right-angled triangle*

(b) (i)

Kelas *Class*	Pecahan murid mendapat gred A *Fraction of students obtained grade* A	Peratusan murid mendapat gred A *Percentage of students obtained grade* A
1A	$\dfrac{24}{30}$	80%
1B	$\dfrac{35}{40}$	87.5%
1C	$\dfrac{27}{36}$	75%

(ii) Kelas yang mencapai peratusan gred A yang paling tinggi dalam Matematik ialah 1B.
The class that achieved the highest percentage of grade A *in Mathematics is* 1B.
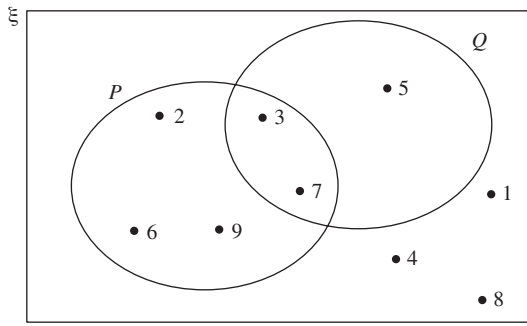
(c)
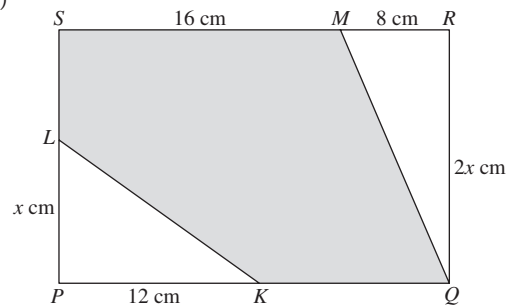
$24(2x) - \dfrac{1}{2}(12)(x) - \dfrac{1}{2}(2x)(8) = 238$
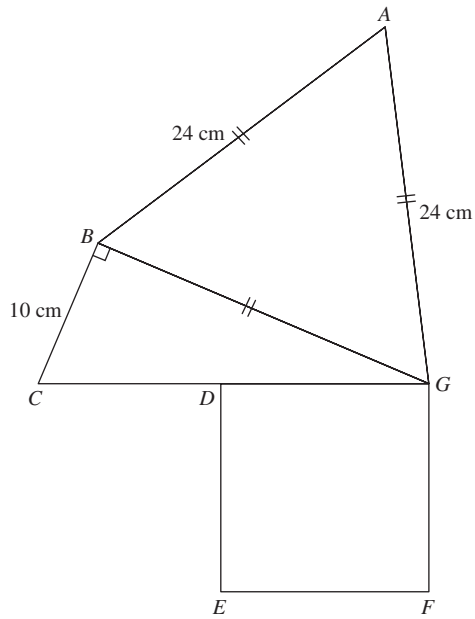
$48x - 6x - 8x = 238$

$34x = 238$

$x = 7$

6 (a) (i)

(ii) $Q' = \{1, 2, 4, 6, 8, 9\}$

(b)

(i) $CG^2 = 10^2 + 24^2$
$= 100 + 576$
$= 676$
$CG = \sqrt{676}$
$= 26$ cm

(ii) $CD = DE = EF = FG = 13$ cm
Perimeter $= 24 + 10 + 13 + 13 + 13 + 13 + 24$
$= 110$ cm

(c) Tempahan bagi bulan Mei
Bookings for May
$= 35 - 6 - 9 - 4 - 6$
$= 10$

Tempahan Rumah Inap Desa
Bookings for Homestays