Bahagian A / *Section A*

1. **A**: $\frac{7}{100} = 0.07$

B: $\frac{7}{10} = 0.7$

Jawapan / *Answer*: **A**

2. Faktor bagi 72
The factors of 72
= 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

Faktor bagi 108
The factors of 108
= 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108

Faktor sepunya bagi 72 dan 108
The common factors of 72 *and* 108
= 1, 2, 3, 4, 6, 9, 12, 18, 36

Jawapan / *Answer*: **B**

3. $1 - (\sqrt[3]{216} - \sqrt[3]{h})^2 = 0$
$(6 - \sqrt[3]{h})^2 = 1$
$(6 - \sqrt[3]{h}) = \sqrt{1}$
$\sqrt[3]{h} = 6 - 1$
$= 5$
$h = 5^3$
$= 125$

Jawapan / *Answer*: **D**

4. Katakan x ialah bilangan murid lelaki
Let x is the number of boys
$x + (x + 60) = 480$
$2x + 60 = 480$
$2x = 480 - 60$
$= 420$
$x = \frac{420}{2}$
$= 210$

Nisbah bilangan murid lelaki kepada bilangan murid perempuan
The ratio of the number of boys to the number of girls
= 210 : 210 + 60
= 210 : 270
= 7 : 9

Jawapan / *Answer*: **D**

5. $4a + \frac{10^2 - 5^1 a}{5}$
$= 4a + 2 - a$
$= 3a + 2$

Jawapan / *Answer*: **D**

6. $5 - 2(1 - x) = 3x + 3$
$5 - 2 + x = 3x + 3$
$3 + x = 3x + 3$
$3x - x = 3 - 3$
$2x = 0$
$x = 0$

Jawapan / *Answer*: **D**

7. $8 - \frac{1}{2}x \leqslant \frac{1}{4}x - 1$
$-\frac{1}{2}x - \frac{1}{4}x \leqslant -1 - 8$
$-\frac{3}{4}x \leqslant -9$
$-\frac{3}{4}x \times \left(-\frac{3}{4}\right) \geqslant -9 \times \left(-\frac{3}{4}\right)$
$x \geqslant 12$

Jawapan / *Answer*: **C**

8. Peratusan murid yang jisim kurang daripada 47 kg
The percentage of pupils whose mass is less than 47 kg
$= \frac{6 + 3}{6 + 3 + 11 + 2 + 3} \times 100\%$
$= \frac{9}{25} \times 100\%$
= 36%

Jawapan / *Answer*: **B**

9. $\angle LFG = 30°$ (Sudut bertentangan bucu / *Vertically opposite angles*)
$z = 30° + 25°$
$= 55°$

Jawapan / *Answer*: **C**

10. $\frac{1}{2} \times 6 \times RS = 24$
$3 \times RS = 24$
$RS = 24 \div 3$
$= 8$ cm

Jawapan / *Answer*: **C**

11. Perimeter segi empat tepat *WXYZ*
The perimeter of rectangle WXYZ
= 14 + 4 + 14 + 4
= 36 cm

$\frac{1}{2} \times (8 + k) \times 4 = 36$
$2 \times (8 + k) = 36$
$8 + k = \frac{36}{2}$
$k = 18 - 8$
$= 10$ cm

Jawapan / *Answer*: **B**

12. $K = \{5, 7, 8\}$,
$L = \{4, 5, 6, 8\}$
$M = \{5, 6, 8\}$

A: $K \subset L$ (Palsu / *False*)
B: $L \subset K$ (Palsu / *False*)
C: $M \subset K$ (Palsu / *False*)
D: $M \subset L$ (Benar / *True*)

Jawapan / *Answer*: **D**

13. $PR^2 = 15^2 - 9^2$
$= 144$
$PR = 12$ cm

$PQ = 12 \div 2$
$= 6$ cm

$SQ^2 = 10^2 - 6^2$
$= 64$
$SQ = 8$ cm

Perimeter seluruh rajah
The perimeter of the whole diagram
$= PT + TR + RS + SQ + QP$
$= 9 + 15 + 10 + 8 + 6$
$= 48$ cm

Jawapan / *Answer*: **B**

14. **A**: $\frac{5}{8} = 0.625$

B: $\frac{9}{10} = 0.9$

C: $\frac{13}{14} = 0.929$

D: $\frac{15}{18} = 0.833$

Jawapan / *Answer*: **C**

15.

3	15	24	30
5	5	8	10
2	1	8	2
2	1	4	1
2	1	2	1
	1	1	1

GSTK / *LCM*
$= 3 \times 5 \times 2 \times 2 \times 2$
$= 120$

Jawapan / *Answer*: **B**

16. **A**: $\sqrt{\frac{1}{25}} = \frac{1}{5}$

B: $\sqrt[3]{\frac{1}{125}} = \frac{1}{5}$

C: $\frac{\sqrt{25}}{\sqrt[3]{125}} = 55 = 1$

D: $1 - \sqrt[3]{\frac{64}{125}} = 1 - 45 = 15$

Jawapan / *Answer*: **C**

17. $ST : TU : SU$
$= 3 : 4 : 5$
$= 7.5 : 10 : 12.5$ $\times 2.5$

Perimeter segi tiga itu
The perimeter of the triangle
$= 7.5 + 10 + 12.5$
$= 30$ cm

Jawapan / *Answer*: **B**

18. $p - 2q = 6$ ……①
$p = 3 + q$ ……②

Gantikan ② ke dalam ①
Substitute ② *into* ①
$(3 + q) - 2q = 6$
$3 - q = 6$
$q = 3 - 6$
$= -3$

Jawapan / *Answer*: **D**

19. $-2 - 3m + 7m - 11$
$= -3m + 7m - 2 - 11$
$= 4m - 13$

Jawapan / *Answer*: **B**

20. $140° + 2m = 180°$
$2m = 40°$
$m = 20°$

$3m + n = 180°$
$3(20°) + n = 180°$
$n = 180° - 60°$
$= 120°$

Jawapan / *Answer*: **C**

Bahagian B / *Section B*

21. (a)

(−7 + 12) = 5	−12 + 7 = −5
7 − (−12) = 19	−12 − (−4) = −8

(b)

7 ialah faktor bagi 105. *7 is a factor of 105.*	(✓)
1 ialah faktor perdana bagi 32. *1 is a prime factor of 32.*	( )
15 bukan faktor bagi 95. *15 is not a factor of 95.*	(✓)

22. (a) (i) $4^{\boxed{3}} = 64$

(ii) $(-5)^3 =$ −125

(b)

100	165	189	200
250	326	400	431

23. (a) (i) $2 : 5 = 8 : 20$ (× 4)

(ii) $0.4 : 0.9 = 4 : 9$ (÷ 10)

(b) (i) 2

(ii) 4

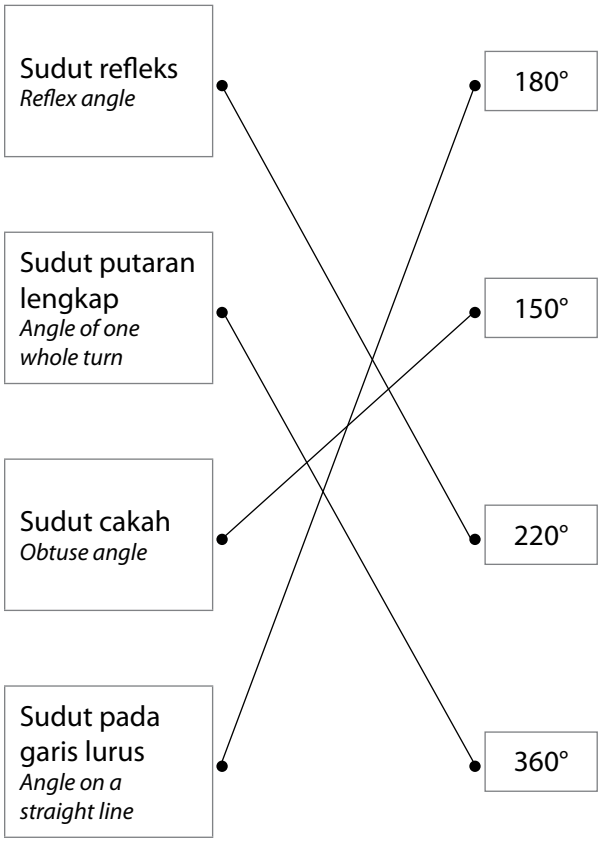
24. (a)

$t + 5 = 7$	✓
$2p = -p + 3$	✓

(b) (i) $x > -4$

(ii) $x \leq 1$

25.



Bahagian C / *Section C*

26. (a) $1 + 6(x - 1) < 9x + 4$

$1 + 6x - 6 < 9x + 4$

$6x - 9x < 4 - 1 + 6$

$-3x < 9$

$x > -3$

$4x + 8 \leq 48 - x$

$4x + x \leq 48 - 8$

$5x \leq 40$

$x \leq 8$

$\therefore -3 < x \leq 8$

(b) (i) $4x + 2y = 6$

$8x + 6y - 4 = 6$

$8x + 6y = 10$

(ii) $4x + 2y = 6$

$2x + y = 3$

$y = 3 - 2x$ ..... ①

$8x + 6y = 10$

$4x + 3y = 5$ ..... ②

Gantikan ① ke dalam ②:
Substitute ① into ②:

$4x + 3(3 - 2x) = 5$

$4x + 9 - 6x = 5$

$-2x = -4$

$x = 2$

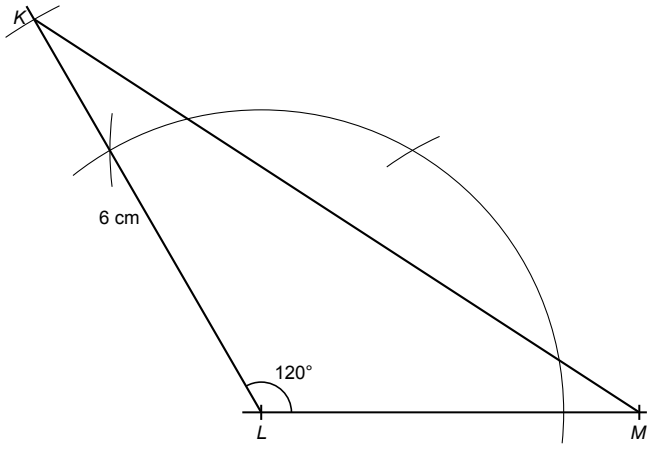
Gantikan $x = 2$ ke dalam ①:
Substitute $x = 2$ into ①:

$y = 3 - 2(2)$

$= -1$

Maka / *Hence*, $x = 2$, $y = -1$

(c) (i)



(ii) 33°

27. (a) (i) $\sqrt{5}$ bukan nombor nisbah. Nombor $\sqrt{5}$ tidak boleh ditulis dalam bentuk pecahan, iaitu $\frac{p}{q}$, dengan keadaan p dan q ialah integer, $q \neq 0$.
$\sqrt{5}$ is not a rational number. Number $\sqrt{5}$ cannot be written in fractional form, that is $\frac{p}{q}$, such that p and q are integers, $q \neq 0$.

(ii) $\frac{5}{12} + \left(7 - 2\frac{3}{4}\right) \div \left(-\frac{3}{4}\right)$
$= \frac{5}{12} + \left(\frac{17}{4}\right) \times \left(-\frac{4}{3}\right)$
$= \frac{5}{12} - \frac{17}{3}$
$= -\frac{21}{4}$
$= -5.25$

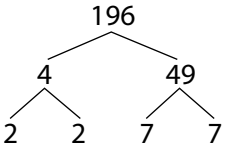
(b)

2	48	56	72
2	24	28	36
2	12	14	18
	6	7	9

FSTB / *HCF* $= 2 \times 2 \times 2$
$= 8$

$p + 3 = 8$
$p = 5$

(c)



$196 = 2 \times 2 \times 7 \times 7$
$= 2^2 \times 7^2$
$= (2 \times 7)^2$
$= 14^2$

Nombor perdana iaitu 2 dan 7 boleh dikumpulkan dalam dua kumpulan yang sama. Maka, 196 ialah nombor kuasa dua sempurna.
The prime numbers, 2 and 7 can be grouped into two identical groups. Therefore, 196 *is a perfect square.*

28. (a) $\frac{2}{5} \times$ RM5 500 = RM2 200

Wang yang diterima oleh ibu Puan Intan
Money received by Madam Intan's mother
$= \frac{3}{5} \times$ RM2 200
= RM1 320

Wang yang diterima oleh bapa Puan Intan
Money received by Madam Intan's father
$= \frac{2}{5} \times$ RM2 200
= RM880

(b) (i) $7 + x$

(ii) $3x = 36$
$x = 12$

Bilangan gula-gula di dalam bekas *P*
Number of sweets in container P
$= 7 + 12$
$= 19$

(c) (i) $m + m + m + 120° = 180°$
$3m + 120° = 180°$
$3m = 180° - 120°$
$3m = 60°$
$m = \frac{60°}{3}$
$= 20°$

(ii) $x + 25° = 90°$
$x = 65°$

$90° + 55° + 93° + y = 360°$
$238° + y = 360°$
$y = 360° - 238°$
$y = 122°$

29. (a) $\angle VUT = 180° - 45° - 86°$
$= 49°$

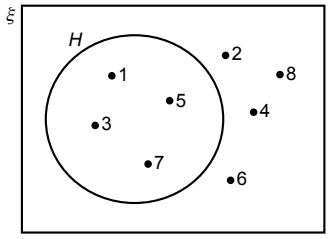
$x = 180° - 45° - 49° - 49°$
$= 37°$

$y = 180° - 49°$
$= 131°$

(b) Panjang sisi / *Length of side*
$= \frac{85}{4}$
$= 21.25$ m

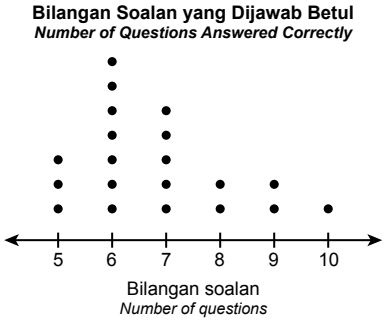
Luas tapak / *Area of the base*
$= 21.25 \times 21.25$
$= 451.56$ m^2

(c) (i) $\xi = \{1, 2, 3, 4, 5, 6, 7, 8\}$
$H = \{1, 3, 5, 7\}$



(ii) $n(H') = 4$

30. (a) (i)



(ii) Peratusan bagi 7 soalan yang dijawab dengan betul
The percentage of 7 questions answered correctly

$= \frac{5}{20} \times 100\%$

$= 25\%$

(b) $(5x)^2 = 16^2 + (3x)^2$

$25x^2 = 256 + 9x^2$

$25x^2 - 9x^2 = 256$

$16x^2 = 256$

$x^2 = \frac{256}{16}$

$x^2 = 16$

$x = \sqrt{16}$

$x = 4$

(c) $-5 + 5 - 9 = -9$

$-5 + m - 1 = -9$

$m = -3$

$m + n - 9 = -9$

$-3 + n - 9 = -9$

$n = 3$

31. (a) (i)

3	45	60	90
5	15	20	30
	3	4	6

FSTB / *HCF* $= 3 \times 5$

$= 15$

$\therefore$ 15 bungkusan / *packages*

(ii) 3 pen, 4 buku nota dan 6 kotak pensel warna.
3 *pens,* 4 *notebooks and* 6 *boxes of colour pencils.*

(b) (i) Isi padu kotak *P*
Volume of box P

$= \frac{729}{27}$

$= 27 \text{ cm}^3$

Panjang sisi kotak *P*
Length of side of box P

$= \sqrt[3]{27}$

$= 3 \text{ cm}$

(ii) Jumlah luas permukaan kotak *P*
Total surface area of box P

$= 6 \times 3 \times 3$

$= 54 \text{ cm}^2$

Panjang sisi kotak *Q*
Length of side of box Q

$= \sqrt[3]{729}$

$= 9 \text{ cm}$

Jumlah luas permukaan kotak *Q*
Total surface area of box Q

$= 6 \times 9 \times 9$

$= 486 \text{ cm}^2$

Jumlah luas permukaan bagi kedua-dua kotak itu
The total surface area of the two boxes

$= 54 + 486$

$= 540 \text{ cm}^2$

(c) (i) $2 - 2a - (-5a)$

$= 2 - 2a + 5a$

$= 2 + 3a$

(ii) $\frac{-14gh^2 + (-7h^2g)}{27}$

$= \frac{-21gh^2}{7}$

$= -3gh^2$