Jawapan Praktis Ekstra Sumatif Bab 1

1. –37, –13, –8, 5, 11

2. $3\frac{2}{5} + (2 - 0.25) \div \frac{7}{16}$

$= \frac{17}{5} + 1.75 \div \frac{7}{16}$

$= \frac{17}{5} + \boxed{\frac{7}{4}} \times \boxed{\frac{16}{7}}$

$= \boxed{7\frac{2}{5}}$

3. $\frac{p}{15} = -0.6$

$p = -9$

$\frac{-12}{q} = -0.6$

$q = 20$

$p - q = -9 - 20$

$= -29$

4. $-\frac{5}{6} - 0.125 \div 2\frac{1}{4}$

$= -\frac{5}{6} - \frac{1}{8} \div 2\frac{1}{4}$

$= -\frac{5}{6} - \frac{1}{8} \times \frac{4}{9}$

$= -\frac{5}{6} - \frac{1}{18}$

$= -\frac{8}{9}$

5. $0.25 \div \left(1\frac{1}{5}\right) \times \left(-\frac{12}{25}\right)$

$= 0.25 \div \frac{6}{5} \times \left(-\frac{12}{25}\right)$

$= \frac{1}{4} \times \frac{5}{6} \times \left(-\frac{12}{25}\right)$

$= \frac{5}{24} \times \left(-\frac{12}{25}\right)$

$= -\frac{1}{10}$

6. $1.9 \div \left[1\frac{1}{12} - \left(-2\frac{1}{4}\right)\right]$

$= 1.9 \div \left(1\frac{1}{12} + 2\frac{1}{4}\right)$

$= 1.9 \div \frac{10}{3}$

$= 1.9 \times \frac{3}{10}$

$= \frac{57}{100}$

7. $-8 + 6 + (-9)$

$= -11$

$-8 + x + 2 = -11$

$-6 + x = -11$

$x = -5$

8. Katakan x = bilangan murid lelaki
Let x = the number of boys

$\frac{3}{10} \times x = 9$

$x = 30$

Katakan y = bilangan murid
Let y = the number of students

$\frac{3}{7} \times y = 30$

$y = 70$

Bilangan murid perempuan
The number of girls
$= 70 - 30$
$= 40$

9. Azlan menyelam sedalam 30 m.
Azlan dived as deep as 30 m.

Faizul menyelam sedalam
Faizul dived as deep as
$= 25\text{ m} - 3\text{ m} + 5\text{ m}$
$= 27\text{ m}$

Tidak. Faizul perlu menyelam sedalam 3 m lagi untuk berjumpa Azlan di kedalaman 30 m di bawah aras laut.
No. Faizul needs to dive as deep as 3 m *more to meet Azlan at the depth of* 30 m *below the sea level.*

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10. Pecahan wang yang diterima oleh 2 orang anak Encik Ali yang lain
Fraction of money received by the other 2 children of Encik Ali

$= 1 - \frac{2}{5} - \frac{1}{4}$

$= \frac{7}{20}$

Jumlah wang
The total of money

$= (\text{RM}350 + \text{RM}350) \div \frac{7}{20}$

$= \text{RM}2\,000$

Nilai wang yang diterima oleh anak bongsu
Value of money received by the youngest child

$= \frac{1}{4} \times \text{RM}2\,000$

$= \text{RM}500$

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Jawapan Praktis Ekstra Sumatif Bab 2

1.

2	72
2	36
2	18
3	9
3	3
	1

2.

2	18	30	54
3	9	15	27
	3	5	9

FSTB bagi 18, 30 dan 54
HCF of 18, 30 *and* 54
= 2 × 3
= 6

3. Faktor bagi 45 / *Factors of* 45
= 1, 3, 5, 9, 15, 45

Faktor sepunya 30 dan 45
Common factors of 30 *and* 45
= 1, 3, 5

$a \times b \times c$
= 1 × 3 × 5
= 15

4.

3	3	4	6
2	1	4	2
2	1	2	1
	1	1	1

GSTK bagi 3, 4 dan 6
LCM of 3, 4 *and* 6
= 3 × 2 × 2
= 12

5.

2	6	8	12
	3	4	6

FSTB bagi 6, 8 dan 12
HCF of 6, 8 *and* 12
= 2

2	6	8	12
2	3	4	6
2	3	2	3
3	3	1	3
	1	1	1

GSTK bagi 6, 8 dan 12
LCM of 6, 8 *and* 12
= 2 × 2 × 2 × 3
= 24

Beza antara GSTK dan FSTB
Difference between LCM and HCF
= 24 – 2
= 22

6.

2	**32**	36
2	16	18
	8	9

∴ **P** = 32

2	32	36
2	16	18
2	8	9
2	4	9
2	2	9
3	1	9
3	1	3
	1	1

GSTK bagi 32 dan 36
LCM of 32 *and* 36
= 2 × 2 × 2 × 2 × 2 × 3 × 3
= 288

7.

3	3	6	9
2	1	2	3
3	1	1	3
	1	1	1

GSTK bagi 3, 6 dan 9
LCM of 3, 6 *and* 9
= 3 × 2 × 3
= 18

Gandaan sepunya 3, 6 dan 9
Common multiples of 3, 6 *and* 9
= 18, 36, 54

Nombor pada belon yang diberi
Numbers on the balloon that were given
= 27 dan / *and* 45

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8.

2	4	8	10
	2	4	5

Ukuran reben yang paling panjang
The length of the longest ribbon
= 2 m

Bilangan reben yang diperoleh
The number of ribbons obtained
= 2 + 4 + 5
= 11

9.

5	45	60	90
3	9	12	18
3	3	4	6
2	1	4	2
2	1	2	1
	1	1	1

Bilangan minimum cenderamata
The minimum number of gifts
= 5 × 3 × 3 × 2 × 2
= 180

Bilangan minimum kotak pen penyerlah
The minimum number of boxes of highlighters
= 180 ÷ 90
= 2

10.

2	126	90	54
3	63	45	27
3	21	15	9
	7	5	3

Setiap bungkusan ada 7 batang pen, 5 buah buku nota dan 3 kotak pensel warna.
Each package has 7 pens, 5 notebooks and 3 boxes of colour pencils.

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Jawapan Praktis Ekstra Sumatif Bab 3

1. $\sqrt{p} = 7$
$p = 7^2$
$= 49$

2. Nombor kuasa tiga sempurna antara 10 dan 800
Perfect cubes between 10 *and* 800
= 27, 64, 125, 216, 343, 512, 729

Bilangan nombor kuasa tiga sempurna antara 10 dan 800
The number of perfect cubes between 10 *and* 800
= 7

3. $q^3 = \frac{27}{125}$
$q = \sqrt[3]{\frac{27}{125}}$
$= \frac{3}{5}$

4. $\left(\frac{\sqrt{3} \times \sqrt{12}}{\sqrt[3]{0.216} \times 10}\right)^2$
$= \left(\frac{\sqrt{36}}{0.6 \times 10}\right)^2$
$= \left(\frac{6}{6}\right)^2$
$= 1$

5. $\left(\sqrt[3]{-1\frac{61}{64}} \div \sqrt{\frac{25}{4}}\right)^2 = \left(\sqrt[3]{-\frac{125}{64}} \div \boxed{\frac{5}{2}}\right)^2$
$= \left(\boxed{-\frac{5}{4}} \times \boxed{\frac{2}{5}}\right)^2$
$= \boxed{\frac{1}{4}}$

6. Panjang satu sisi bahagian *A*
The length of a side of part A
$= \sqrt{144}$
= 12 cm
= 0.12 m

Panjang satu sisi bahagian *B*
The length of a side of part B
$= \sqrt{400}$
= 20 cm
= 0.2 m

Panjang kayu yang perlu dibeli
The length of the wood should buy
= (0.2 × 4) + (0.12 × 3)
= 0.8 + 0.36
= 1.16 m

7. Luas sekeping jubin
The area of a tile
= 0.45 × 0.45
= 0.2025 m^2

Jumlah bilangan jubin yang diperlukan
The total number of tiles needed
= (4.5 × 4.95) ÷ 0.2025
= 110

Kaedah alternatif
Bilangan jubin yang diperlukan bagi bahagian panjang bilik tidur
The number of tiles needed for the length's part of the bedroom
= 4.95 m ÷ (45 ÷ 100) m
= 11

Bilangan jubin yang diperlukan bagi bahagian lebar bilik tidur
The number of tiles needed for the width's part of the bedroom
= 4.5 m ÷ (45 ÷ 100) m
= 10

Jumlah bilangan jubin yang diperlukan
The total number of tiles needed
= 11 × 10
= 110

8. Isi padu blok kayu
The volume of a wooden blocks
= 2 × 2 × 2
= 8 cm^3

Isi padu kotak
The volume of the box
= 8 × 8 × 8
= 512 cm^3

Bilangan blok kayu yang boleh disusun
The number of wooden blocks that can be arranged
= 512 ÷ 8
= 64

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Indra tidak dapat menyusun kesemua blok kayu itu. Dia hanya boleh menyusun 64 blok kayu.
Indra can not arrange all the wooden blocks. She can only arrange 64 wooden blocks.

9. Isi padu air di dalam 100 bekas kubus
The volume of water in the 100 cubic containers
$= (50 \times 50 \times 50) \div 100$
$= 1\ 250\ cm^3$

Isi padu sebuah bekas kubus
The volume a cubic container
$= 12 \times 12 \times 12$
$= 1\ 728\ cm^3$

Isi padu air yang perlu ditambah lagi
The volume of water that needs to be added
$= 1\ 728 - 1\ 250$
$= 478\ cm^3$

10. Isi padu kotak *A*
The volume of box A
$= 512 \div 8$
$= 64\ cm^3$

Beza jumlah luas permukaan
The difference in the total surface area
$= ((\sqrt[3]{512})^2 \times 6) - ((\sqrt[3]{64})^2 \times 6)$
$= 384 - 96$
$= 288\ cm^2$

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1. $p : q = 6 : 5$
$= 6 \times 2 : 5 \times 2$
$= 12 : 10$

$q : r = 10 : 3$

sama / *same*

$\therefore p : q : r = 12 : 10 : 3$

2. $x : y = 3 : 7$

$y : z = 7 : 9$

sama / *same*

$\therefore x : y : z = 3 : 7 : 9$

3. $a : b = 2 : 3$
$= 2 \times 4 : 3 \times 4$
$= 8 : 12$

$b : c = 4 : 5$
$= 4 \times 3 : 5 \times 3$
$= 12 : 15$

sama / *same*

$\therefore a : b : c = 8 : 12 : 15$

4. Diberi bahawa $m : n = 3 : 5$. Maka, $\frac{n}{m} = \frac{5}{3}$.

Given that $m : n = 3 : 5$. *Thus,* $\frac{n}{m} = \frac{5}{3}$.

$$3m - n : 4m = \frac{3m - n}{4m}$$
$$= \frac{3m}{4m} - \frac{n}{4m}$$
$$= \frac{3}{4} - \frac{1}{4}\left(\frac{n}{m}\right)$$
$$= \frac{3}{4} - \frac{1}{4}\left(\frac{5}{3}\right)$$
$$= \frac{1}{3}$$
$$= 1 : 3$$

5. Diberi / *Given* $PQ : QS = 4 : 11$, $PS = 150$ cm.

$$PQ = \frac{150}{15} \times 4$$
$$= 40 \text{ cm}$$

$$RS = 150 - 40 - 40$$
$$= 70 \text{ cm}$$

6. Katakan nilai wang Jie Lun = x dan nilai wang Bing You = y.
Let the value of Jie Lun's money = x and the value of Bing You's money = y

RMx + RMy = RM172 ..... ①
$y = 172 - x$ ..... ②

$x - 40 : \frac{3}{4}y = 2 : 3$

Maka / *Thus*,

$$\frac{x - 40}{\frac{3}{4}y} = \frac{2}{3}$$
$$3(x - 40) = 2\left(\frac{3}{4}y\right)$$
$$3x - 120 = \frac{3}{2}y \text{ ..... ③}$$

Masukkan ② ke dalam ③,
Insert ② *into* ③,

$$3x - 120 = \frac{3}{2}y$$
$$3x - 120 = \frac{3}{2}(172 - x)$$
$$3x + \frac{3}{2}x = 258 + 120$$
$$4.5x = 378$$
$$x = 84$$

Maka, nilai asal wang Jie Lun ialah RM84.
Thus, the value of Jie Lun's money at first is RM84.

7. Pecahan bagi susu segar
Fraction of fresh milk

$$= \frac{28}{100}$$

Pecahan bagi bahan lain
Fraction of other ingredients

$$= \frac{72}{100}$$

Pecahan bagi tepung kastard
Fraction of custard flour

$$= \frac{2}{9} \times \frac{72}{100}$$
$$= \frac{4}{25}$$

Pecahan bagi jagung manis
Fraction of sweet corn

$$= \frac{3}{9} \times \frac{72}{100}$$
$$= \frac{6}{25}$$

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Pecahan bagi gula
Fraction of sugar

$= \frac{4}{9} \times \frac{72}{100}$

$= \frac{8}{25}$

Jumlah pecahan susu segar dan gula
The total fraction of fresh milk and sugar

$= \frac{28}{100} + \frac{8}{25}$

$= \frac{3}{5}$

Jumlah pecahan tepung kastard dan jagung manis
The total fraction of custard flour and sweet corn

$= \frac{4}{25} + \frac{6}{25}$

$= \frac{2}{5}$

Maka / *Thus*, $\frac{1}{5}$ bahagian / *part* = 250 g.

Jumlah jisim / *The total mass*
= 250 × 5
= 1 250 g
= 1.25 kg

8. Diberi nisbah wang Wong kepada wang Kamal
Given the ratio of Wong's money to Kamal's money
= 8 : 2

Jika Wong memberi 3 bahagian kepada Kamal, nilai wang mereka akan menjadi sama.
If Wong gives 3 parts to Kamal, the amount of their money will be the same.

Maka 1 bahagian / *Thus 1 part*
= RM60 ÷ 3
= RM20

Nilai wang yang dimiliki oleh Wong pada asalnya
The amount of money owned by Wong at first
= RM20 × 8
= RM160

9. Alice : Brendan : Christine
= 8 : 1 : 3
= 8 × 20 : 1 × 20 : 3 × 20
= 160 : 20 : 60

Beza antara bilangan pelekat Alice dengan Brendan
The difference in the number of stickers between Alice and Brendan
= 160 – 20
= 140

10. Jisim betik : Jisim nanas
= 8 : 9
= 8 × 5 : 9 × 5
= 40 : 45

Jisim nanas : Jisim mangga
= 5 : 2
= 5 × 9 : 2 × 9
= 45 : 18

sama

Jumlah jisim
The total mass

$= \frac{270}{18} \times (40 + 45 + 18)$

= 1 545 g

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Jawapan Praktis Ekstra Sumatif Bab 5

1. $6p(q^2 + 3p)$
$= 6(-3)[4^2 + 3(-3)]$
$= (-18)(7)$
$= -126$

2. $-8 - 4g + 3(2g - 1)$
$= -8 - 4g + 6g - 3$
$= -11 + 2g$
$= 2g - 11$

3. $21xy^3 \times 3 \div (-7y)$
$= \frac{21xy^3}{-7y} \times 3$
$= -3xy^2 \times 3$
$= -9xy^2$

4. Perimeter
$= (5x - 1) + (5x - 1) + 3x$
$= 10x - 2 + 3x$
$= (13x - 2)$ cm

5. Luas / *Area*
$= (5x - 1)(3x)$
$= (15x^2 - 3x)$ cm^2

6. Bilangan gula-gula berperisa oren
The number of orange-flavoured sweets
$= 6n$

Maka / *Thus*,
$m = n + 3n + 6n$

Apabila / *When* $n = 20$,
$m = 20 + 3(20) + 6(20)$
$= 200$

7. Bilangan setem Akmal
The number of Akmal's stamps
$= 2m$

Bilangan setem Atikah
The number of Atikah's stamps
$= 2m + 25$

Beza antara bilangan setem Aisyah dengan Atikah
The difference in the number of stamps between Aisyah and Atikah
$= 2m + 25 - m$
$= m + 25$

8. Beza antara bilangan murid perempuan dengan murid lelaki
The difference between the number of female and male students
$= (8xy - 3) - 4y$
$= 8xy - 4y - 3$
$= 4y(2x - 1) - 3$

9. Baki wang yang diterima
The balance received
$=$ RM50(2) $-$ RM$x(p)$ $-$ RM$y(q)$
$=$ RM100 $-$ RM$x(p)$ $-$ RM$y(q)$
$=$ RM$(100 - xp - yq)$

10. Luas kawasan yang tidak ditanam rumput
The area of the region that is not planted with grass
$= (9a \times 7b) - (3a \times 2b) - \left[\frac{1}{2} \times 6 \times (4a + 7b)\right]$
$= 63ab - 6ab - [3(4a + 7b)]$
$= (57ab - 12a - 21b)$ m^2

Apabila $a = 3$ dan $b = 2$,
When $a = 3$ *and* $b = 2$,
$= [57(3)(2) - 12(3) - 21(2)]$ cm^2
$= 264$ m^2

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Jawapan Praktis Ekstra Sumatif Bab 6

1. $4(m - 2) = 16$
$4m - 8 = 16$
$4m = 24$
$m = 6$

2. $6 - 2g = 2(3g - 5)$
$6 - 2g = 6g - 10$
$-2g - 6g = -10 - 6$
$-8g = -16$
$g = 2$

3. $3p + q = 3$
$q = 3 - 3p$ ..... ①

$3p - 4q = 18$ ..... ②

Masukkan ① ke dalam ②,
Insert ① into ②,
$3p - 4(3 - 3p) = 18$
$3p - 12 + 12p = 18$
$15p = 18 + 12$
$15p = 30$
$p = 2$

4. Jumlah harga bagi x batang pensel
The total price of x pencils
= RM0.8x

Jumlah harga bagi y batang pen
The total price of y pens
= [3(RM0.8)]y
= RM2.4y

RM2.4y = RM8 + RM0.8x
$\therefore$ $2.4y - 0.8x = 8$
$24y - 8x = 80$
$3y - x = 10$

5. Persamaan linear / *A linear equation*:
$q - p = 50°$ ..... ①

atau / *or*

$q + p = 140°$ ..... ②

② – ①:
$2p = 90°$
$p = 45°$

Gantikan $p = 45°$ dalam ①,
Substitute $p = 45°$ into ①,
$q - 45° = 50°$
$q = 95°$

6. Harga sehelai seluar
The price of a pants
= RM40

Harga sehelai kemeja-T
The price of a T-shirt
= RM20

Bilangan seluar yang dibeli
The number of pants bought
= x

Bilangan kemeja-T yang dibeli
The number of T-shirts bought
= $x + 4$

Diberi / *Given*
RM40x + RM20(x + 4) = RM150 – RM10
RM40x + RM20x + RM80 = RM140
RM60x = RM60
$x = 1$

Bilangan kemeja-T yang dibeli
The number of T-shirts bought
= 1 + 4
= 5

7. Umur semasa / *Current age*
Maria : (x + 24) tahun / *years old*
Anak / *Son* = x tahun / *years old*

Umur pada 3 tahun lepas / *Age in the last 3 years*
Maria : (x + 21) tahun / *years old*
Anak / *Son* = (x – 3) tahun / *years old*

Diberi / *Given*,
$(x + 21) = 3(x - 3)$
$x + 21 = 3x - 9$
$x = 15$

Umur semasa anak Maria ialah 15 tahun.
The current age of Maria's son is 15 years old.

8. Harga sebuah buku cerita / *The price of a storybook*
= RMx

Diberi / *Given*,
(5)RMx + (8)RM(x + 9) = RM200 – RM11
RM13x + RM72 = RM189
RM13x = RM117
$x = 9$

Harga sebuah buku cerita / *The price of a storybook*
= RM9

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9. Diberi / *Given*,

$2(3x + 2) + 2x = 2(4x - 3) + 2(x + 1)$

$6x + 4 + 2x = 8x - 6 + 2x + 2$

$8x + 4 = 10x - 4$

$-2x = -8$

$x = 4$

Diberi / *Given*,

$(4x - 3)(x + 1) - \frac{1}{2}(2x)(y) = 5$

$4x^2 + 4x - 3x - 3 - xy = 5$

$4(4^2) + 4(4) - 3(4) - 3 - 4y = 5$

$64 + 16 - 12 - 3 - 4y = 5$

$4y = 60$

$y = 15$

10. Harga sebiji epal
The price of an apple
$= x$

Harga sebiji oren
The price of an orange
$= y$

$5x + 6y = \text{RM}15$ ..... ①

$7x + 8y = \text{RM}20.40$ ..... ②

② − ①:

$2x + 2y = \text{RM}5.40$

$x = \text{RM}2.70 - y$ ..... ③

Masukkan ③ ke dalam ①,
Insert ③ *into* ①,

$5(\text{RM}2.70 - y) + 6y = \text{RM}15$

$\text{RM}13.50 - 5y + 6y = \text{RM}15$

$y = \text{RM}1.50$

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1. RM30 – RM3.50m > RM2

$30 - 3.5m > 2$

$-3.5m > 2 - 30$

$m < \frac{-28}{-3.5}$

$m < 8$

2. $\frac{3p-1}{7} \geqslant 5$

$3p - 1 \geqslant 35$

$3p \geqslant 36$

$p \geqslant 12$

3. $5x - 7 > 8$

$5x > 15$

$x > 3$

Nilai minimum bagi x ialah 4.
The minimum value of x is 4.

4. $p > -1$

$p = 0, 1, 2, 3, 4, 5, ...$

$p \leqslant 3$

$p = 3, 2, 1, 0, -1, -2, ...$

Maka / *Thus*,

$p = 0, 1, 2,$ dan / *and* 3

5. $\frac{y}{3} < 1$

$y < 3$

$1 - 4y \leqslant 9$

$-4y \leqslant 8$

$y \geqslant -2$

Maka / *Thus*,

$-2 \leqslant y < 3$

6. $x - 4 \leqslant 2 - \frac{1}{5}x$

$x + \frac{1}{5}x \leqslant 2 + 4$

$\frac{6}{5}x \leqslant 6$

$x \leqslant 5$

$x - 4 > -\frac{2}{3}$

$x > 3\frac{1}{3}$

Maka / Thus,

$3\frac{1}{3} < x \leqslant 5$

$p - 1 = 3\frac{1}{3}$

$p = 4\frac{1}{3}$ atau / *or* $\frac{13}{3}$

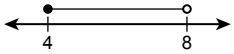
$q = 5$

7. $10 \leqslant 4x - 6 < 26$

$10 + 6 \leqslant 4x < 26 + 6$

$16 \leqslant 4x < 32$

$4 \leqslant x < 8$



8. Bilangan wang kertas RM5
The number of RM5 *notes*
$= x$

$2(\text{RM}100) + 5(\text{RM}50) + 2(\text{RM}10) + x(\text{RM}5) < \text{RM}550$

$\text{RM}200 + \text{RM}250 + \text{RM}20 + x(\text{RM}5) < \text{RM}550$

$\text{RM}470 + x(\text{RM}5) < \text{RM}550$

$x(\text{RM}5) < \text{RM}80$

$x < 16$

Nilai maksimum bagi x ialah 15.
The maximum value of x is 15.

9. Jumlah hasil jualan insurans
The total sales of the insurances
$= x$

$\text{RM}1\,500 + 8\%(x) \geqslant \text{RM}5\,000$

$8\%(x) \geqslant \text{RM}3\,500$

$x \geqslant \text{RM}43\,750$

Nilai minimum bagi x ialah RM43 750.
The minimum value of x is RM43 750.

10. $\text{RM}2.50x - \text{RM}1.30x > \text{RM}150$

$\text{RM}1.20x > \text{RM}150$

$12x > 1\,500$

Penyelesaian ketaksamaan:
Solution of the inequality:

$12x > 1\,500$

$x > 125$

Puan Tan menjual lebih daripada 125 potong kek.
Madam Tan sells more than 125 *slices of cake.*

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Jawapan Praktis Ekstra Sumatif Bab 8

1. Sudut pedalaman
Interior angle

2. $\angle SOQ$ ialah sudut bertentang bucu dengan $\angle POR$.
$\angle SOQ$ is a vertically opposite angle of $\angle POR$.

Maka, / *Thus,* $\angle POR = \angle SOQ$.

3. (a) Garis JK / *Line JK*
(b) $\angle t$
(c) $\angle s$
(d) $\angle q$

4. $\angle CDB$

5. $\angle IGK$

6. Sudut pedalaman bagi $\angle EFG$
Interior angle of $\angle EFG$
$= 60° + 70°$
$= 130°$

$a = 130° - (180° - 105°)$
$= 55°$

7. $n = 180° - 80°$
$= 100°$

Maka, garis *AB* dan *EF* ialah garis selari.
Thus, lines AB and EF are parallel lines.

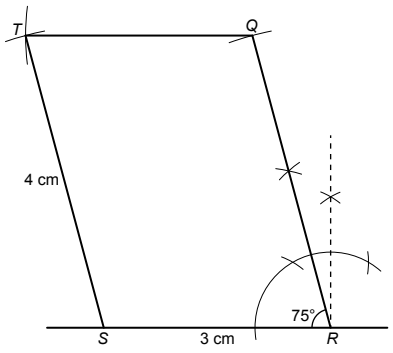
$m = 180° - 70°$
$= 110°$

8. (a) ✗
(b) ✓
(c) ✓
(d) ✗

9. $\angle q = (90° \div 6) \times 5$
$= 15° \times 5$
$= 75°$

Nilai sudut konjugat bagi q
The value of conjugate angle of q
$= 360° - 75°$
$= 285°$

10.



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Jawapan Praktis Ekstra Sumatif Bab 9

1. $\angle x = 180° - 40° - 28° - 90°$
$= 22°$

2. $\angle WYX = 180° \div 3$
$= 60°$

$\angle XYZ = 180° - 60°$
$= 120°$

3. $p = 180° - 90° - (360° - 240° - 60°)$
$= 90° - 60°$
$= 30°$

4. $\angle DFG = 180° - 2(180° - 60° - 65)$
$= 180° - 110°$
$= 70°$

$q = 360° - 60° - 70°$
$= 230°$

5. $m = 180° - \angle RAQ - \angle AQR$
$= 180° - 80° - 80°$
$= 20°$

$n = 180° - \angle SRA - 40°$
$= 180° - (100° - 20°) - 40°$
$= 60°$

$m + n = 20° + 60°$
$= 80°$

6. $\angle KLI = 180° - 115°$
$= 65°$

$a + b = 180° - 65°$
$= 115°$

$c + d = 180° - 65°$
$= 115°$

$a + b + c + d$
$= 115° + 115°$
$= 230°$

7. $\angle ABC = \angle BCD = 120°$

$\angle AED = 540° - 85° - 120° - 120° - 95°$
$= 120°$

8. $\angle BAD = 180° - 42°$
$= 138°$

9. (a) $\angle y = 180° - 52°$
$= 128°$

$\angle TQU = 100° - 52°$
$= 48°$

$\angle x = 180° - 48° - 84°$
$= 48°$

(b) Segi tiga sama kaki
Isosceles triangle

10. (a) $w = (180° - 90°) \div 2$
$= 45°$

(b) $x = 180° - 45°$
$= 135°$

(c) $y = 135° - 55°$
$= 80°$

(d) $z = 180° - 80° - 74°$
$= 26°$

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Jawapan Praktis Ekstra Sumatif Bab 10

1. Perimeter seluruh rajah
The perimeter of the whole diagram
$= (4 \times 6) + (6 \times 6)$
$= 60$ cm

2. Luas kawasan yang berlorek
The area of the shaded region
$= (20 \times 24) - \left(\frac{1}{2} \times 10 \times 20\right) - \left(\frac{1}{2} \times 24 \times 20\right)$
$= 480 - 100 - 240$
$= 140$ cm^2

3. Perimeter rajah *Q*
The perimeter of the diagram Q
$= (5 \times 4) + (1 \times 4)$
$= 24$ cm

4. Luas kawasan tidak berlorek
The area of the unshaded region
$= 144 - \left(\frac{1}{2} \times 6 \times 12\right) - \left(\frac{1}{2} \times 6 \times 12\right) - \left(\frac{1}{2} \times 6 \times 6\right)$
$= 54$ cm^2

5. $TS = 14 \div \frac{1}{2} \div 7$
$= 4$ cm $= PT$

Perimeter kawasan yang berlorek
The perimeter of shaded region
$= 4 + 10 + 12 + 11 + 8.06$
$= 45.06$ cm

6. $PQ = 48 \div 4$
$= 12$ cm

Luas kawasan yang berlorek
The area of shaded region
$= (12 \times 12) - \left(\frac{1}{2} \times 12 \times 12\right) - \left(\frac{1}{2} \times 12 \times 5\right)$
$= 42$ cm^2

7. Perimeter lelayang TUVW
The perimeter of kite TUVW
$= 13 + 7 + 13 + 7$
$= 40$ cm

$PQ = (40 - 12 - 12) \div 2$
$= 8$ cm

Luas segi empat selari *PQRS*
The area of parallelogram PQRS
$= 8 \times 10$
$= 80$ cm^2

8. Perimeter baki kertas, *F*
The perimeter of the remaining piece of paper, F
$= 5 + 16 + 15 + 6 + 10 + 10$
$= 62$ cm

9. (a) Bilangan jubin yang diperlukan
The number of tiles needed
$= (1.2 \text{ m} \div 10 \text{ cm}) \times (1.2 \text{ m} \div 10 \text{ cm})$
$= 144$

(b) Jumlah harga jubin yang diperlukan
The total price of tiles needed
$= 144 \times$ RM2.50
$=$ RM360

RM400 mencukupi untuk membeli semua jubin yang diperlukannya.
RM400 *enough to buy all the tiles that he need.*

10. (a) Luas kawasan yang berlorek
The area of the shaded area
$= (10 \times 7) - (5 \times 2) - (3 \times 4)$
$= 48$ m^2

Jumlah kos / *Total cost*
$= 48 \times$ RM25
$=$ RM1 200

(b) Perimeter bagi bahagian yang berlorek
The perimeter of the shaded part
$= 3 + 8 + 5 + 2 + 2 + 7 + 4 + 3$
$= 34$ m

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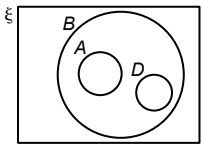
Jawapan Praktis Ekstra Sumatif Bab 11

1. (a) Set kosong / *An empty set*
(b) Bukan set kosong / *Not an empty set*
(c) Bukan set kosong / *Not an empty set*
(d) Bukan set kosong / *Not an empty set*

2. Subset bagi set P
The subset of set P
$= \{\ \}, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}, \{a, b, c\}$

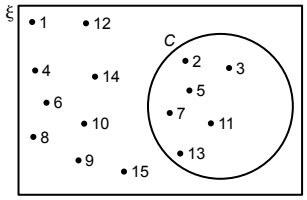
3. $Q = \{2, 4, 6\}$, $R = \{2\}$, $S = \{1, 2, 3, 4, 6, 8, 12, 24\}$
(a) $\subset$
(b) $\not\subset$
(c) $\subset$

4.



5. (a) N ialah set nombor kuasa dua sempurna antara 1 dan 100.
N is the set of perfect squares between 1 *and* 100.
(b) $N = \{4, 9, 16, 25, 36, 49, 64, 81\}$
(c) $N = \{x : x$ ialah nombor kuasa dua sempurna dan $1 < x < 100\}$
$N = \{x : x$ *is a perfect square and* $1 < x < 100\}$

6. (a) $\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15\}$
$C = \{2, 3, 5, 7, 11, 13\}$



(b) $C' = \{1, 4, 6, 8, 9, 10, 12, 14, 15\}$
$n(C') = 9$

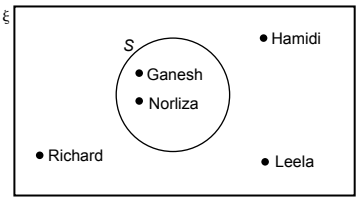
7. $D = \{2, 3, 5p, 7\}$
$E = \{2, 3, 5, 7\}$

$5p = 5$
$p = 1$

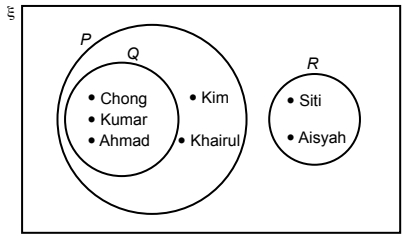
8. (a) $K = \{5, 7, 9, 11, 13, 15\}$

Diberi / *Given* $L \subset K$,
$\therefore L = \{5, 7, 11, 13\}$
$L' = \{9, 15\}$

(b) Katakan set S mewakili murid yang memakai cermin mata.
Let set S represents students who wear spectacles.

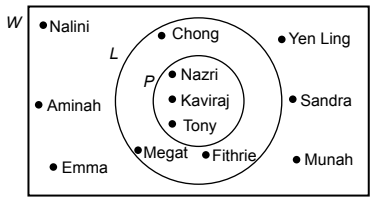


9. (a) $\xi = \{$Ahmad, Kim, Chong, Kumar, Khairul, Siti, Aisyah$\}$
$P = \{$Ahmad, Kim, Chong, Kumar, Khairul$\}$
$Q = \{$Ahmad, Chong, Kumar$\}$
$R = \{$Siti, Aisyah$\}$



(b) $Q' = \{$Kim, Khairul, Siti, Aisyah$\}$
(c) Hubungan antara set P dan set Q
The relationship between set P and set Q
$= Q \subset P$

10. (a) $W = \{$Chong, Fithrie, Nazri, Kaviraj, Megat, Tony, Aminah, Emma, Nalini, Munah, Sandra, Yen Ling$\}$
$L = \{$Chong, Fithrie, Nazri, Kaviraj, Megat, Tony$\}$
$P = \{$Nazri, Kaviraj, Tony$\}$



(b) Set semesta / *Universal set*
$=$ Set W
$= \{$Chong, Fithrie, Nazri, Kaviraj, Megat, Tony, Aminah, Emma, Nalini, Munah, Sandra, Yen Ling$\}$

(c) Hubungan antara set W, set L dan set P
The relationship between set W, set L and set P
$= P \subset L \subset W$

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1.

Bilangan gol *Number of goals*	Gundalan *Tally*	Kekerapan *Frequency*
0	𝍸	5
1	𝍸 | | |	8
2	𝍸 | | | |	9
3	𝍸 |	6

2.

Tempoh masa (jam) *Duration (hour (h))*	Kekerapan *Frequency*
1	4
2	5
3	6
4	7
5	2

3. $\frac{2}{11} \times 110° = 20°$

$110° + 20° + 4x + 95° + 2x + 3x = 360°$

$9x = 135°$

$x = 15°$

$20° \rightarrow$ RM230

Simpanan / *Saving*

$= (3 \times 15°) \times \frac{\text{RM}230}{20°}$

= RM517.50

4. (a) Mac / *March*

(b) Peratusan jualan bagi bulan Mei daripada jumlah jualan

Percentage of May of the total sales

$= \frac{35}{30 + 25 + 50 + 15 + 35 + 45} \times 100\%$

= 17.5%

5. (a) Peratusan telur gred A yang dihasilkan

Percentage of grade A's egg produced

$= \frac{2\,500}{2\,000 + 3\,500 + 4\,000 + 2\,500} \times 100\%$

= 20.8%

(b) Jisim kebanyakan telur yang dihasilkan di ladang itu adalah antara 50 g hingga 59 g.

The mass of most of the eggs produced in the farm is between 50 g *to* 59 g.

6. (a) Julai / *July*

(b) Beza antara jumlah pendapatan Razak dan Raju

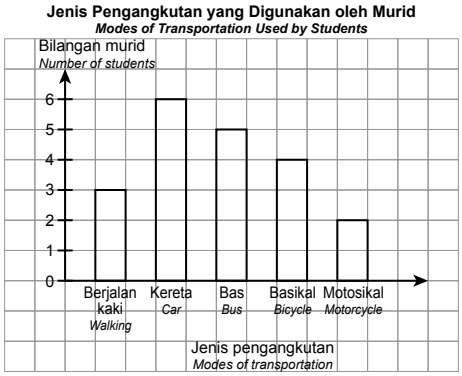
The difference between the total income of Razak and Raju

= (RM800 + RM1 000 + RM1 000 + RM600 + RM600) – (RM1 000 + RM600 + RM800 + RM600 + RM800)

= RM4 000 – RM3 800

= RM200

7. Berjalan kaki / *Walking* = 3
Kereta / *Car* = 6
Bas / *Bus* = 5
Basikal / *Bicycle* = 4
Motosikal / *Motorcycle* = 2



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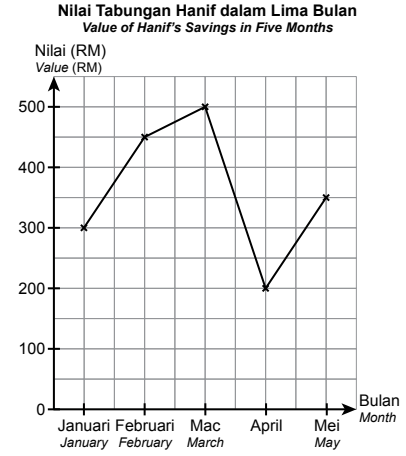

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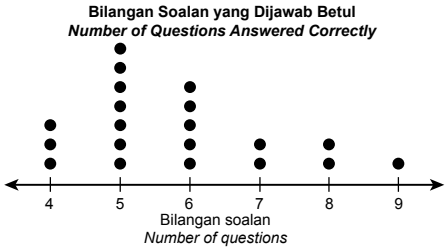
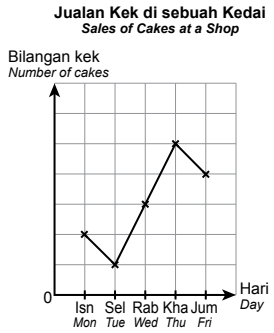
9. (a) 4 soalan / *questions* = 3
5 soalan / *questions* = 7
6 soalan / *questions* = 5
7 soalan / *questions* = 2
8 soalan / *questions* = 2
9 soalan / *questions* = 1



(b) 5 soalan / 5 *questions*

10. (a) 10 biji kek / *cakes* → 2 unit / *units*
20 biji kek / *cakes* → 4 unit / *units*



(b) Jumlah bilangan kek
Total number of cakes
= 10 + 5 + 15 + 25 + 20
= 75

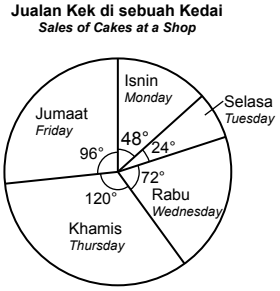
Isnin / *Monday* $= \frac{10}{75} \times 360° = 48°$

Selasa / *Tuesday* $= \frac{5}{75} \times 360° = 24°$

Rabu / *Wednesday* $= \frac{15}{75} \times 360° = 72°$

Khamis / *Thursday* $= \frac{25}{75} \times 360° = 120°$

Jumaat / *Friday* $= \frac{20}{75} \times 360° = 96°$



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Jawapan Praktis Ekstra Sumatif Bab 13

1. (a) *PR*
(b) *e*
(c) *TU*
(d) *m*

2. $CE^2 = 50^2 - (15 + 15)^2$
$= 1\,600$
$CE = \sqrt{1\,600}$
$= 40$ cm
$DE = 40 \div 2$
$= 20$ cm
$BD^2 = 20^2 + 15^2$
$= 625$
$BD = \sqrt{625}$
$= 25$ cm

Perimeter kawasan berlorek
The perimeter of the shaded region
$= 15 + 50 + 20 + 25$
$= 110$ cm

3. Tinggi segi tiga
The height of the triangle
$= 17^2 - 8^2$
$= 15$ cm

Luas segi tiga
The area of the triangle
$= \frac{1}{2} \times 16 \times 15$
$= 120$ cm^2

4. Segi tiga bersudut tirus
Acute-angled triangle

5. $RS = 150 \div \left(\frac{1}{2} \times 20\right)$
$= 15$ cm

$QS^2 = 20^2 + 15^2$
$= 625$
$QS = \sqrt{625}$
$= 25$

Panjang satu sisi segi empat sama
The length of a side of square
$= \sqrt{144}$
$= 12$ cm

Panjang satu sisi segi tiga
The length of a side of triangle
$= 25 - 12$
$= 13$ cm

Perimeter seluruh rajah
The perimeter of the whole diagram
$= 3(12) + 2(13) + 15 + 20$
$= 97$ cm

6. $FC = \sqrt{169}$
$= 13$ cm

Tinggi segi tiga kecil yang berlorek
The height of small shaded triangle
$= \sqrt{13^2 - 12^2}$
$= 5$ cm

Tinggi segi tiga besar yang berlorek
The height of big shaded triangle
$= 14 - 5$
$= 9$ cm

Luas kawasan berlorek
The area of shaded region
$= \frac{1}{2} \times 5 \times 12 + \frac{1}{2} \times 9 \times 12$
$= 30 + 54$
$= 84$ cm^2

Kaedah Alternatif / *Alternative Method*
Luas kawasan berlorek
The area of shaded region
$= \frac{1}{2} \times 14 \times 12$
$= 84$ cm^2

7. $PQ = 6$ cm
$SP = \sqrt{8^2 + 6^2}$
$= 10$ cm

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8. Panjang satu sisi segi empat sama *GHJR*
The length of a side of square GHJR
$= 60 \text{ cm} \div 4$
$= 15 \text{ cm}$

Panjang satu sisi segi empat sama *PQRS*
The length of a side of square PQRS
$= \sqrt{625}$
$= 25 \text{ cm}$

$QG = \sqrt{25^2 - 15^2}$
$= 20 \text{ cm}$

9. Luas segi tiga *BCD*
The area of triangle BCD
$= \frac{1}{2} \times 10 \times 5$
$= 25 \text{ cm}^2$

Luas segi tiga *AFE*
The area of triangle AFE
$= \frac{1}{2} \times 8 \times FE$
$= 4 \times (\sqrt{10^2 - 8^2})$
$= 4 \times 6$
$= 24 \text{ cm}^2$

Luas kawasan berlorek
The area of shaded region
$= (10 \times 10) - 25 - 24$
$= 51 \text{ cm}^2$

10. (a) $QR = \sqrt{17^2 - 8^2}$
$= 15 \text{ m}$

$ST = 30 - 15 - 9$
$= 6 \text{ m}$

$SU = \sqrt{8^2 + 6^2}$
$= 10 \text{ m}$

(b) Perimeter kawasan yang ditanam dengan timun
The perimeter of the area planted with cucumbers
$= 17 + 30 + 10 + 9$
$= 66 \text{ m}$

Panjang pagar itu tidak mencukupi kerana perimeter kawasan yang ditanam dengan timun ialah 66 m.
The length of the fence is not sufficient because the perimeter of the area planted with cucumbers is 66 m.

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