Jawapan

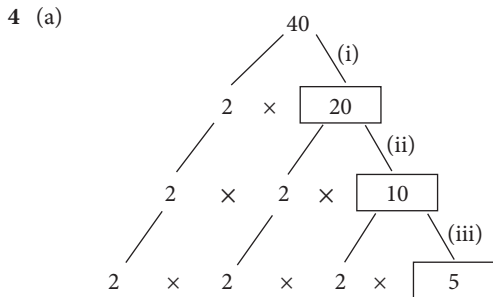**Praktis Formatif**

1 7 ialah satu faktor bagi 21.
   21 ialah satu faktor bagi 63.
   7 is a factor of 21.
   21 is a factor of 63.
   ∴ $m = 21$
   Jawapan/*Answer*: **B**

2 (a) $145 \div 9 = 16.111 \ldots$
        9 bukan faktor bagi 145.
        9 is not a factor of 145. ✗
   (b) $91 \div 13 = 7$
        13 ialah satu faktor bagi 91.
        13 is a factor of 91. ✓
   (c) $51 \div 3 = 17$
        3 ialah faktor bagi 51.
        3 is a factor of 51. ✓
   (d) $85 \div 7 = 12$ baki 1
        $85 \div 7 = 12$ *remainder* 1
        7 bukan faktor bagi 85.
        7 is not factor of 85. ✗

3

Nombor *Number*	Faktor-faktor *Factors*
(a) 18	1, ②, ③, 6, 9, 18
(b) 42	1, ②, ③, 6, ⑦, 14, 21, 42
(c) 63	1, ③, ⑦, 9, 21, 63
(d) 95	1, ⑤, ⑲, 95

4 (a)

   (b) Faktor-faktor perdana bagi 40 ialah 2, 5.
       The prime factors of 40 *are* 2, 5.

5 (a)

2	252
2	126
3	63
3	21
7	7
	1

Semua faktor perdana bagi 252 ialah 2, 3, 7.
All the prime factors of 252 *are* 2, 3, 7.
   (b) $252 = 2 \times 2 \times 3 \times 3 \times 7$

6 (a) (i) 1, 2, 5, 10   (ii) 1, 3, 5, 15
        (iii) 1, 2, 4, 5, 10, 20 (iv) 1, 5, 7, 35
   (b) (i) 1, 2, 5, 10   (ii) 1, 5

7 (a) (i) 1, 2, 3, 4, 6, 8, 12, 24
        (ii) 1, 2, 4, 8, 16, 32
   (b) 8

8 (a)

2	18,	72,	90
3	9,	36,	45
3	3,	12,	15
	1,	4,	5

   (b) $2 \times 3 \times 3 = 18$
        Faktor sepunya terbesar bagi 18, 72 dan 90 ialah 18.
        The highest common factor of 18, 72 *and* 90 *is* 18.

9

2	300,	444,	708
2	150,	222,	354
3	75,	111,	177
	25,	37,	59

Bilangan maksimum mancis yang mungkin
The possible maximum number of matches
$= 2 \times 2 \times 3 = 12$

10 (a) 3, 6, 9, 12   (b) 84, 119, 154

11 (a) $58 \div 4 = 14.5$
         58 bukan suatu gandaan bagi 4.
         58 is not a multiple of 4. ✗
    (b) $90 \div 5 = 18$
         90 ialah suatu gandaan bagi 5.
         90 is a multiple of 5. ✓
    (c) $164 \div 6 = 27\frac{1}{3}$
         164 bukan suatu gandaan bagi 6.
         164 is not a multiple of 6. ✗
    (d) $252 \div 9 = 28$
         252 ialah suatu gandaan bagi 9.
         252 is a multiple of 9. ✓

12 (a) (i) 2, 4, 6, 8, 10, 12 (ii) 4, 8, 12, 16, 20, 24
         (iii) 6, 12, 18, 24, 30, 36
    (b) (i) 4, 8, 12, 16   (ii) 12, 24, 36, 48

13 A:

2	12, 48, 60
2	6, 24, 30
3	3, 12, 15
2	1, 4, 5
2	1, 2, 5
5	1, 1, 5
	1, 1, 1

Gandaan sepunya terkecil bagi 12, 48 dan 60
The lowest common multiple of 12, 48 *and* 60
$= 2 \times 2 \times 3 \times 2 \times 2 \times 5$
$= 240$
B:

2	24, 48, 60
2	12, 24, 30
2	6, 12, 15
2	3, 6, 15
3	3, 3, 15
5	1, 1, 5
	1, 1, 1

Gandaan sepunya terkecil bagi 24, 48 dan 60
The lowest common multiple of 24, 48 *and* 60
$= 2 \times 2 \times 2 \times 2 \times 3 \times 5$
$= 240$
C:

2	36, 48, 60
2	18, 24, 30
2	9, 12, 15
2	9, 6, 15
3	9, 3, 15
3	3, 1, 5
5	1, 1, 5
	1, 1, 1

Gandaan sepunya terkecil bagi 36, 48 dan 60
The lowest common multiple of 36, 48 *and* 60
$= 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5$
$= 720$
D:

2	36, 48, 72
2	18, 24, 36
2	9, 12, 18
2	9, 6, 9
3	9, 3, 9
3	3, 1, 3
	1, 1, 1

Gandaan sepunya terkecil bagi 36, 48 dan 72
The lowest common multiple of 36, 48 *and* 72
$= 2 \times 2 \times 2 \times 2 \times 3 \times 3$
$= 144$
Jawapan/*Answer*: **C**

14 (a) (i)

2	4, 9, 12, 15
2	2, 9, 6, 15
3	1, 9, 3, 15
3	1, 3, 1, 5
5	1, 1, 1, 5
	1, 1, 1, 1

(ii) Gandaan sepunya terkecil bagi 4, 9, 12 dan 15
The lowest common multiple of 4, 9, 12 *and* 15
$= 2 \times 2 \times 3 \times 3 \times 5$
$= 180$

(b) (i) $10 = 2 \times 5$, $25 = 5 \times 5$, $35 = 5 \times 7$
(ii) Gandaan sepunya terkecil bagi 10, 25 dan 35
The lowest common multiple of 10, 25 *and* 35
$= 2 \times 5 \times 5 \times 7$
$= 350$

15 $75 = 3 \times 5 \times 5$

3	15, w
5	5, w
5	1, w
	1, 1

$w = 25$ atau/*or* $w = 75$

Praktis Sumatif

1 Faktor-faktor bagi 42: 1, 2, 3, 6, 7, 14, 21, 42
Tiga faktor lain bagi 42: 1, 7, 21
Factors of 42: 1, 2, 3, 6, 7, 14, 21, 42
Three other factors of 42: 1, 7, 21
Jawapan/*Answer*: **A**

2 A: $36 \div 8 = 4.5$
B: $48 \div 9 = 5\frac{1}{3}$
C: $63 \div 8 = 7.875$
D: $144 \div 8 = 18$
$144 \div 9 = 16$
$k = 144$
Jawapan/*Answer*: **D**

3

2	308
2	154
7	77
11	11
	1

Semua faktor perdana bagi 308 ialah 2, 7, 11.
All the prime factors of 308 *are* 2, 7, 11.
Jawapan/*Answer*: **D**

4

2	5, 15, 20
2	5, 15, 10
5	5, 15, 5
3	1, 3, 1
	1, 1, 1

Gandaan sepunya terkecil bagi 5, 15 dan 20
The lowest common multiple of 5, 15 *and* 20
$= 2 \times 2 \times 5 \times 3$
$= 60$
Jawapan/*Answer*: **B**

5

2	36, 54, 90
3	18, 27, 45
3	6, 9, 15
	2, 3, 5

Faktor sepunya terbesar bagi 36, 54 dan 90
The highest common factor of 36, 54 *and* 90
$= 2 \times 3 \times 3$
$= 18$
Jawapan/*Answer*: **D**

6 (a)

Nombor *Number*	Sepuluh gandaan yang pertama *First ten multiples*
2	2, 4, 6, 8, 10, 12, 14, 16, 18, 20
3	3, 6, 9, 12, 15, 18, 21, 24, 27, 30
5	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
6	6, 12, 18, 24, 30, 36, 42, 48, 54, 60

(b) 30, 60, 90, 120, 150

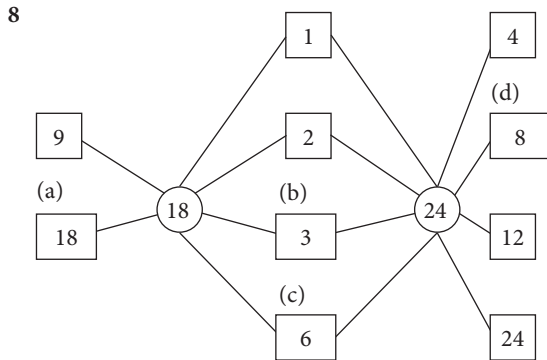**7** Faktor-faktor perdana bagi
Prime factors of
26: 2, 13
35: 5, 7
66: 2, 3, 11
78: 2, 3, 13
84: 2, 3, 7
Nombor-nombor yang mungkin ialah 35, 84.
The possible numbers are 35, 84.

8

9 (a)

```
2 | 18, 24, 42,  60
3 |  9, 12, 21,  30
      3,  4,  7, 10
```

(b) $2 \times 3 = 6$
Faktor sepunya terbesar bagi 18, 24, 42 dan 60 ialah 6.
The highest common factor of 18, 24, 42 *and* 60 *is* 6.

10 (a) (i) 1, 2, 3, 5, 6, 10, 15, 30
(ii) 1, 3, 5, 9, 15, 45
(iii) 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

(b) Faktor-faktor sepunya bagi 30, 45 dan 60 ialah 1, 3, 5, 15.
The common factors of 30, 45 *and* 60 *are* 1, 3, 5, 15.

11 (a) I:
```
2 | 12, 48
2 |  6, 24
3 |  3, 12
      1,  4
```
FSTB/*HCF* $= 2 \times 2 \times 3$
$\quad\quad\quad = 12$
II:
```
2 | 12, 60
2 |  6, 30
3 |  3, 15
      1,  5
```

FSTB/*HCF* $= 2 \times 2 \times 3$
$\quad\quad\quad = 12$
III:
```
2 | 24, 48
2 | 12, 24
2 |  6, 12
3 |  3,  6
      1,  2
```
FSTB/*HCF* $= 2 \times 2 \times 2 \times 3$
$\quad\quad\quad = 24$

IV:
```
2 | 24, 60
2 | 12, 30
3 |  6, 15
      2,  5
```
FSTB/*HCF* $= 2 \times 2 \times 3$
$\quad\quad\quad = 12$
Pasangan nombor I, II dan IV mempunyai FSTB = 12
Pairs of numbers I, II *and* IV *have HCF* = 12

(b)
```
13 | 52, 117, 156
      4,   9,  12
```
FSTB bagi 52, 117, 156 ialah 13.
HCF of 52, 117, 156 *is* 13.

12 (a) $6 = 2 \times 3$
$27 = 3 \times 3 \times 3$
$54 = 2 \times 3 \times 3 \times 3$

(b) $2 \times 3 \times 3 \times 3 = 54$
Gandaan sepunya terkecil bagi 6, 27 dan 54 ialah 54.
The lowest common multiple of 6, 27 *and* 54 *is* 54.

13 $72 = 2 \times 2 \times 2 \times 3 \times 3$
```
2 | 6, 8, 12, k
2 | 3, 4,  6, k
2 | 3, 2,  3, k
3 | 3, 1,  3, k
3 | 1, 1,  1, k
    1, 1,  1, 1
```
$k = 9$, $k = 18$, $k = 36$ atau/*or* $k = 72$

14
```
2 | 15, 12, 18
2 | 15,  6,  9
3 | 15,  3,  9
3 |  5,  1,  3
5 |  5,  1,  1
      1,  1,  1
```
$2 \times 2 \times 3 \times 3 \times 5 = 180$
Selang masa ialah 180 saat.
The time interval is 180 *seconds.*