Fully-Worked Solutions

PRACTICE 2

Section A

1 $\frac{144}{28} = \frac{36}{7}$
28 is not a factor of 144.
Answer: C

2 462 cannot be divided completely by 13, thus 13 is not a prime factor.
Answer: D

3 1×126
2×63
3×42
6×21
9×14
14 and 21 are factors of 126, but 3 is not a factor of 14.
Answer: D

4

1×360	8×45
2×180	9×40
3×120	10×36
6×60	12×30
4×90	15×24
5×72	18×20

The number of factors of 360 is 24.
Answer: B

5 $90 = 2 \times 3^2 \times 5$, $140 = 2^2 \times 5 \times 7$,
$200 = 2^3 \times 5^2$, $320 = 2^6 \times 5$
$2 + 3 + 5 = 10$
Answer: A

6 Answer: D

7 Answer: C

8

1×84	4×21
2×42	6×14
3×28	7×12

8 is not a factor of 84, thus 84 is not a multiple of 8.
Answer: C

9

2	4, 6, 9
2	2, 3, 9
3	1, 3, 9
3	1, 1, 3
	1, 1, 1

LCM = $2 \times 2 \times 3 \times 3 = 36$
Answer: B

10

2	8, 12, 16
2	4, 6, 8
	2, 3, 4

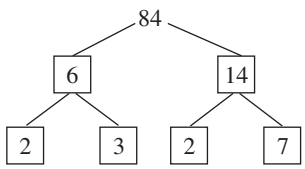
HCF = $2 \times 2 = 4$

2	8, 12, 16
2	4, 6, 8
2	2, 3, 4
2	1, 3, 2
3	1, 3, 1
	1, 1, 1

LCM = $2 \times 2 \times 2 \times 2 \times 3 = 48$
Sum = 4 + 48 = 52
Answer: C

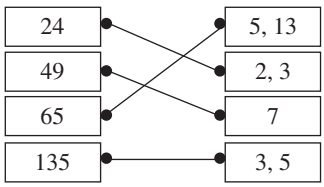
Section B

1



2 (a) FALSE
(b) TRUE
(c) TRUE
(d) FALSE

3



4

(2)	6	9	8	(7)	11
13	(5)	(3)	12	14	10
20	30	35	28	70	60

Section C

1 (a)

3	6, 12, 18
2	2, 4, 6
2	1, 2, 3
3	1, 1, 3
	1, 1, 1

LCM = $3 \times 2 \times 2 \times 3 = 36$

3	6, 12, 18
2	2, 4, 6
	1, 2, 3

HCF = $3 \times 2 = 6$
Difference = 36 – 6 = 30

(b) (i) $48 = 2^4 \times 3$
$72 = 2^3 \times 3^2$

(ii) HCF $= 2 \times 2 \times 2 \times 3 = 24$
LCM $= 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 144$

(c) Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24
Factors of 32 = 1, 2, 4, 8, 16, 32
Common factors = 1, 2, 4, 8

2 (a)

3	54, 90, 72
3	18, 30, 24
2	6, 10, 8
	3, 5, 4

HCF $= 3 \times 3 \times 2 = 18$

(b) (i) Factors of 42 = 1, 2, 3, 6, 7, 14, 21, 42
$x = 6 \times 3 = 18$

(ii)

3	18, 42
2	6, 14
3	3, 7
7	1, 7
	1, 1

LCM $= 3 \times 2 \times 3 \times 7 = 126$

(c) Multiples of 13 = 104, 117, 130, 143, 156, 169, 182, 195
Number of multiples = 8

3 (a) Factors of 48 = 1, 2, 3, 4. 6, 8, 12, 16, 24, 48
y = 2, 3, 6, 8, 12, 16, 24

(b)

3	18, 24
2	6, 8
2	3, 4
2	3, 2
3	3, 1
	1, 1

LCM $= 3 \times 2 \times 2 \times 2 \times 3 = 72$
Number of mint candies
$= \frac{72}{18}$
$= 4$
Number of fruit candies
$= \frac{72}{24}$
$= 3$

(c) Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72
z = 12, 18, 24, 36