

Exercise 1.6

answers on p. 418

- Find the LCM of each of the following pairs of numbers.

(a) 2, 17	(b) 3, 5	(c) 4, 9
(d) 5, 12	(e) 6, 9	(f) 6, 12
(g) 6, 15	(h) 12, 8	(i) 12, 9
(j) 12, 20	(k) 14, 6	(l) 15, 9
(m) 15, 20	(n) 16, 10	(o) 16, 36
(p) 18, 9	(q) 18, 24	(r) 20, 25
(s) 78, 56	(t) 81, 225	(u) 108, 132
(v) 110, 231	(w) 126, 195	(x) 135, 120
(y) 168, 248	(z) 700, 82	
- Find the LCM of each of the following sets of numbers.

(a) 8, 12, 18	(b) 20, 32, 18	(c) 24, 18, 36
(d) 4, 8, 16, 20	(e) 5, 12, 18, 20	(f) 6, 12, 8, 18
(g) 135, 175, 65	(h) 140, 385, 220	(i) 225, 105, 252
- Find the (i) HCF, (ii) LCM and (iii) product of the HCF and the LCM for each of the following pairs of numbers.

(a) 7, 28	(b) 12, 18
(c) 12, 35	(d) 96, 120

Find also the product of each of these pairs of numbers and compare the result with that in (iii). What do you notice?
- *4. The LCM of 6 and a certain number is 24. Find the number. (If there is more than one answer, give the smallest number.)
- *5. The HCF of two numbers is 1 and the LCM of these numbers is 91. What are the numbers?

1.7 NUMBER PATTERNS

We can recall that **whole numbers** are the numbers 0, 1, 2, 3, 4, 5, . . . , and that if the number 0 is excluded, the numbers 1, 2, 3, 4, 5, . . . are known as **natural numbers**.

Answers

- (d) 2×3^2 (e) $2^2 \times 5$ (f) $2^2 \times 3^2$
 (g) $2^4 \times 3$ (h) $2^3 \times 3^2$ (i) $2^4 \times 3^2$
 (j) 2^8

3. (a) 3×3 (b) $2 \times 2 \times 3$
 (c) 3×7 (d) $2 \times 2 \times 2 \times 3$
 (e) $2 \times 3 \times 5$ (f) $2 \times 3 \times 7$
 (g) $2 \times 2 \times 3 \times 3 \times 3$ (h) $5 \times 5 \times 5$
 (i) $2 \times 2 \times 2 \times 3 \times 3 \times 3$
 (j) $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 3$

4. (a) 97 (b) 119 (c) 149
 (d) 199

Exercise 1.5 (p. 15)

1. (a) 1 (b) 1 (c) 6
 (d) 1 (e) 3 (f) 3
 (g) 15 (h) 3 (i) 8
 (j) 9 (k) 1 (l) 1
 (m) 24 (n) 12 (o) 2
 (p) 18 (q) 9 (r) 6
 (s) 21 (t) 3 (u) 12
 (v) 12 (w) 12 (x) 33
 (y) 25 (z) 39
2. (a) 1 (b) 6 (c) 8
 (d) 35 (e) 1 (f) 1
 (g) 12 (h) 3 (i) 8

3. 12, 60

4. 8, 64; 16, 56; 32, 40

Exercise 1.6 (p. 17)

1. (a) 34 (b) 15 (c) 36
 (d) 60 (e) 18 (f) 12
 (g) 30 (h) 24 (i) 36
 (j) 60 (k) 42 (l) 45
 (m) 60 (n) 80 (o) 144
 (p) 18 (q) 72 (r) 100
 (s) 2 184 (t) 2 025 (u) 1 188
 (v) 2 310 (w) 8 190 (x) 1 080
 (y) 5 208 (z) 28 700
2. (a) 72 (b) 1 440 (c) 72
 (d) 80 (e) 180 (f) 72
 (g) 61 425 (h) 1 540 (i) 6 300
3. (a) (i) 7 (ii) 28 (iii) 196
 (b) (i) 6 (ii) 36 (iii) 216
 (c) (i) 1 (ii) 420 (iii) 420

- (d) (i) 24 (ii) 480 (iii) 11 520

The product of the HCF and LCM of each pair of numbers is equal to the product of the respective pair of numbers.

4. 8 5. 7, 13 or 1, 91

Exercise 1.7 (p. 20)

1. (a) 25, 36 (b) 15, 21 (c) 13, 16
 (d) 32, 64 (e) 29, 35 (f) 125, 216
2. (a) 27, 32; Beginning with 2, each term is 5 more than the previous term.
 (b) 243, 729; Beginning with 1, each term is 3 times the previous term.
 (c) 56, 51; Beginning with 81, each term is 5 less than the previous term.
 (d) 15, 21; Beginning with 3, each 'odd term' is 4 more than the previous 'odd term', and beginning with 9, each 'even term' is 4 more than the previous 'even term'.
 (e) 12, 6; Beginning with 384, each term is $\frac{1}{2}$ of the previous term.
 (f) 18, 21; Beginning with 6, each term is 3 more than the previous term, or, consecutive multiples of 3 beginning with 6.
3. (a) 30, 45; Each term is the corresponding triangular number multiplied by 3.
 (b) 16, 25; Consecutive square numbers beginning with 1.
4. (a) 40, 60; Each term is the corresponding triangular number multiplied by 4.
 (b) 16, 25; Consecutive square numbers beginning with 1.
5. (a) For each sequence, each term is twice the previous term.
 (b) 7, 21, 35
 (c) The sum of the first three terms is seven times the first term.
 (d) 7, 14, 28

Exercise 1.8 (p. 24)

1. 4, 8, 10, 12, 14, 16, 18
 Press '2' once and 'x' twice.
 Press input number and '=' to find output number.
2. 7, 9, 13, 15, 17, 19, 21
3. $a + 7 = b$
 Press '7' once and '+' twice.
 Press input number and '=' to find output number.