

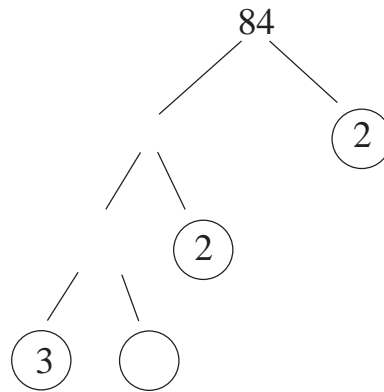
UNIT 2 *Factors***Extra Exercises 2.1**

1. Explain why 51 is *not* a prime number.
2. (a) List the factors of 50.
(b) Which of these factors are prime numbers?
3. (a) List the factors of 80.
(b) How many of the factors of 80 are prime numbers?
4. Which of these numbers are prime numbers?

41, 42, 43, 44, 45
5. Explain why 1180 is *not* a prime number.
6. Write down the prime factors of 99.

UNIT 2 *Factors***Extra Exercises 2.2**

1. (a) Copy and complete the following factor tree for 84:



- (b) Copy the statement below, filling in the missing number to write 84 as the product of its prime factors:

$$84 = 2^{\square} \times 3 \times 7$$

2. (a) Draw two different factor trees for 30.
(b) Write 30 as the product of its prime factors.
3. Write each of the following numbers as the product of its prime factors:
- (a) 92
 - (b) 48
 - (c) 400
 - (d) 1008

UNIT 2 *Factors***Extra Exercises 2.3**

1. Copy the following statements and fill in the missing numbers:

(a) $6 \times 6 \times 6 \times 6 = 6^{\square}$

(b) $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 = 7^{\square}$

(c) $2 \times 2 \times 2 \times 2 \times 2 = 2^{\square}$

(d) $10 \times 10 \times 10 \times 10 \times 10 = 10^{\square}$

2. Calculate:

(a) 6^2

(b) 10^4

(c) 2^5

(d) 3^3

(e) 4^2

(f) 11^3

3. Copy each statement and fill in the missing number:

(a) $1000 = \square^3$

(b) $81 = 3^{\square}$

(c) $12^{\square} = 144$

(d) $16 = 2^{\square}$

(e) $625 = 5^{\square}$

(f) $1000000 = 10^{\square}$

4. Calculate:

(a) $2^3 \times 10^2$

(b) $10^3 \times 3^2$

(c) $10^7 \times 2^5$

UNIT 2 *Factors***Extra Exercises 2.4**

1. (a) List the factors of 80 and the factors of 90.
 (b) Find the highest common factor (HCF) of 80 and 90.

2. Find the HCF of:
 (a) 12 and 18, (b) 25 and 45,
 (c) 36 and 40, (d) 360 and 300.

3. (a) List the first 10 multiples of 12 and 14.
 (b) What is the lowest common multiple (LCM) of 12 and 14 ?

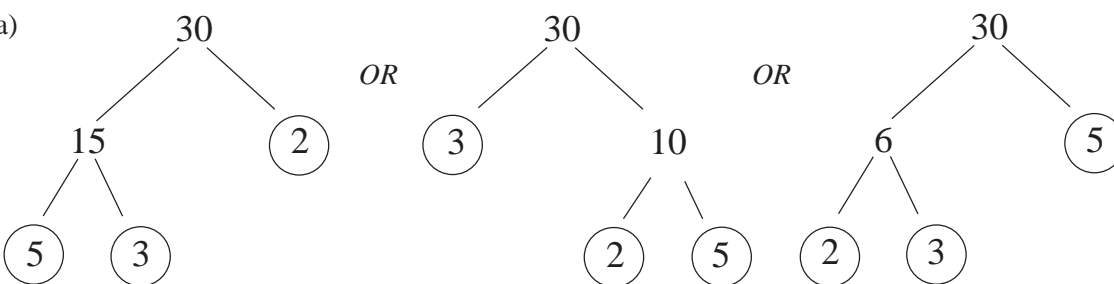
4. Find the LCM of:
 (a) 10 and 15, (b) 40 and 50,
 (c) 70 and 80, (d) 16 and 18.

Extra Exercises 2.1 Answers

1. 51 is divisible by 3 and 17.
2. (a) 1, 2, 5, 10, 25, 50
(b) 2 and 5
3. (a) 1, 2, 4, 5, 8, 10, 16, 20, 40, 80
(b) 2 primes
4. 41 and 43
5. 1180 is divisible by 2, 10, etc.
6. 3 and 11.

Extra Exercises 2.2 Answers

1. (a)  (b) $84 = 2^2 \times 3 \times 7$

2. (a)  (b) $30 = 2 \times 3 \times 5$

3. (a) $92 = 2^2 \times 23$ (b) $48 = 2^4 \times 3$
(c) $400 = 2^4 \times 5^2$ (d) $1008 = 2^4 \times 3^2 \times 7$

Extra Exercises 2.3 Answers

1. (a) $6 \times 6 \times 6 \times 6 = 6^4$ (b) $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 = 7^8$
(c) $2 \times 2 \times 2 \times 2 \times 2 = 2^5$ (d) $10 \times 10 \times 10 \times 10 \times 10 \times 10 = 10^6$
2. (a) 36 (b) 10 000 (c) 32
(d) 27 (e) 16 (f) 1331
3. (a) $1000 = 10^3$ (b) $81 = 3^4$ (c) $12^2 = 144$
(d) $16 = 2^4$ (e) $625 = 5^4$ (f) $1000000 = 10^6$
4. (a) 800 (b) 9000 (c) 320 000 000

Extra Exercises 2.4 Answers

1. (a) 1, 2, 4, 5, 8, 10, 16, 20, 40, 80
1, 2, 3, 5, 6, 9, 10, 15, 30, 45, 90
(b) 10
2. (a) 6 (b) 5 (c) 4 (d) 60
3. (a) 12, 24, 36, 48, 60, 72, 84, 96, 108, 120
14, 28, 42, 56, 70, 84, 98, 112, 126, 140
(b) LCM = 84
4. (a) 30 (b) 200 (c) 560 (d) 144