CHAPTER 1: WHOLE NUMBERS, FACTORS AND MULTIPLES

Exercise 1

1. Write the numbers in words.
   (a) 10 293: _____
   (b) 27 611: _____
   (c) 79 108: _____
   (d) 96 037: _____
   (e) 30 819: _____
   (f) 52 900: _____
   (g) 84 004: _____

2. Write the numbers in numerals.
   (a) Thirteen thousand, five hundred and ninety-one: _____
   (b) Twenty-one thousand, two hundred and eight: _____
   (c) Sixty-six thousand and fourteen: _____
   (d) Fifty thousand, eight hundred and twenty-seven: _____
   (e) Thirty-three thousand and six hundred: _____

(f) Eighty-seven thousand and forty: _____

(g) Twelve thousand and nine: _____

3. Fill in the missing numbers/words.

(a) In 27 035, the digit _____ is in the thousands place.

(b) In 74 691, the digit 7 is in the _____ place.

(c) In 60 823, the digit in the hundreds place is _____.

(d) In 91 245, the value of the digit 9 is _____.

(e) In 52 006, the digit 2 stands for _____.

(f) In 38 470, the digit in the ten thousands place is _____.

4. Fill in the missing numbers.

(a) 29 571 = _____ + 9000 + 500 + 70 + 1

(b) 83 064 = 80 000 + _____ + 60 + 4

(c) 70 819 = _____ + 800 + 10 + 9

(d) 59 400 = 50 000 + 9000 + _____

(e) 40 000 + 5000 + 900 + 20 + 7 = _____

(f) 10 000 + 3000 + 200 + 4 = _____

(g) 30 000 + 9000 + 50 + 6 = _____

(h) 90 000 + 100 + 70 + 3 = _____

5. Arrange the numbers in order. Begin with the smallest.

(a) 40 918, 19 639, 85 007, 27 075

_____

(b) 74 024, 70 275, 70 428, 74 210

_____

(c) 19 774 9892, 23 001, 10 426

_____

6. Arrange the numbers in order. Begin with the greatest.

(a) 57 642, 29 880, 90 161, 41 053

_____

(b) 32 018, 30 081, 32 180, 30 218

_____

(c) 10 630, 71 055, 8695, 39 909

_____

7. Complete the number pattern.

(a) 5600, 10 600, 15 600, _____, _____

(b) 41 266, 51 266, _____, 71 266, _____

(c) 7201, _____, 47 201, _____, 87 201

(d) _____, _____, 10 123, 11 123, 12 123

8. Round the numbers to the nearest ten.

(a) 37 ≈ _____ (b) 84 ≈ _____

(c) 152 ≈ _____ (d) 445 ≈ _____

(e) 698 ≈ _____. (f) 1649 ≈ _____.

(g) 2063 ≈ _____. (h) 3006 ≈ _____.

9. Round the numbers to the nearest hundred.

(a) 120 ≈ _____. (b) 595 ≈ _____.

(c) 805 ≈ _____. (d) 1352 ≈ _____.

(e) 2746 ≈ _____. (f) 3225 ≈ _____.

(g) 4303 ≈ _____. (h) 6051 ≈ _____.

10. Round the numbers to the nearest thousand.

(a) 1345 ≈ _____. (b) 5601 ≈ _____.

(c) 12 785 ≈ _____. (d) 26 210 ≈ _____.

(e) 56 643 ≈ _____. (f) 79 999 ≈ _____.

(g) 84 444 ≈ _____. (h) 98 499 ≈ _____.

Exercise 2

1. Round the numbers to the nearest ten. Then estimate the value.

(a) 57 + 62 ≈ _____ + _____ = _____

(b) 219 – 45 ≈ _____ – _____ = _____

(c) 485 – 94 ≈ _____ – _____ = _____

(d) 554 – 187 ≈ _____ – _____ = _____

2. Round the numbers to the nearest hundred. Then estimate the value.

   (a) 715 + 283 ≈ _____ + _____ = _____

   (b) 3153 + 948 ≈ _____ + _____ = _____

   (c) 861 – 327 ≈ _____ – _____ = _____

   (d) 4203 – 994 ≈ _____ – _____ = _____

3. Round the numbers to the nearest thousand. Then estimate the value.

   (a) 3478 + 1469 ≈ _____ + _____ = _____

   (b) 14 945 + 2578 ≈ _____ + _____ = _____

   (c) 9412 – 7125 ≈ _____ – _____ = _____

   (d) 58 500 – 21 499 ≈ _____ – _____ = _____

4. Estimate the value.

   (a) 291 + 108 + 387 ≈ _____ + _____ + _____ = _____

   (b) 703 – 199 – 213 ≈ _____ – _____ – _____ = _____

   (c) 48 × 3 ≈ _____ × _____ = _____

   (d) 215 × 7 ≈ _____ × _____ = _____

5. Estimate the value.

   (a) 81 ÷ 2 ≈ _____ ÷ _____ = _____

   (b) 294 ÷ 3 ≈ _____ ÷ _____ = _____

   (c) 364 ÷ 6 ≈ _____ ÷ _____ = _____

   (d) 557 ÷ 8 ≈ _____ ÷ _____ = _____

6. Find all the factors of the following numbers.

   (a) 18: _____

   (b) 24: _____

   (c) 25: _____

   (d) 28: _____

7. Find the common factors of the pairs of numbers.

   (a) 16 and 28: _____

   (b) 12 and 18: _____

   (c) 20 and 50: _____

   (d) 24 and 32: _____

8. Write the first twelve multiples.

   (a) 3: _____

   (b) 4: _____

   (c) 7: _____

   (d) 8: _____

9. Find the missing numbers.

   (a) The third multiple of 6 is _____.

   (b) The fifth multiple of 9 is _____.

   (c) The seventh multiple of 5 is _____.

   (d) The eighth multiple of 7 is _____.

10. Find the first two common multiples of the pairs of numbers.

(a) 2 and 9: _____

(b) 4 and 6: _____

(c) 5 and 8: _____

(d) 3 and 7: _____

11. Circle 'Yes' or 'No'. Show workings to support your answers.

(a) Is 4 a factor of 18? Yes / No

(b) Is 36 a multiple of 3? Yes / No

(c) Is 2 a factor of 26? Yes / No

(d) Is 45 a multiple of 6? Yes / No

Level 2

Exercise 1

1. Fill in the missing numbers/words.

   (a) In 73 810, the digit 7 stands for 7 × _____.

   (b) In 25 576, the value of the digit 7 is 7 × _____.

   (c) In 88 800, the value of the digit in the _____ place is 8 × 100.

   (d) In 42 028, the sum of the values of the digit 2 in the thousands place and tens place is _____.

   (e) In 90 390, the difference between the value of the digit 9 in the ten thousands place and the value of the digit 9 in the tens place is _____.

   (f) In 81 656, the value of the digit 6 in the hundreds place is _____ more than the value of the digit 6 in the ones place.

2. Work out the answers.

   (a) The sum of the factors of 6 is _____.

   (b) The product of all the factors of 10 is _____.

   (c) The product of the first two multiples of 5 is _____.

   (d) The difference between the second multiple of 8 and the third multiple of 5 is _____.

   (e) The sum of all the common factors of 12 and 20 is _____.

(f) The sum of the first two common multiples of 4 and 6 is _____.

(g) The difference between the largest and smallest factors of 24 is _____.

(h) The product of the fifth multiple of 3 and the fourth multiple of 2 is _____.

3. Fill in the missing numbers.

(a) Mr Tham bought a television for $19 889. This amount rounded to the nearest $1000 is $_____.

(b) Helmi jogged for a distance of 1553 m. This distance rounded to the nearest 10 m is _____ m.

(c) The mass of a watermelon is 3187 g. This mass rounded to the nearest 100 g is _____ g.

(d) The volume of water in the container is 4565 m*l*. This volume rounded to the nearest 10 m*l* is _____ m*l*.

4. Write down the value.

(a) 2 thousands 6 hundreds 4 tens and 12 ones: _____

(b) 1 thousand 3 hundreds 27 tens 9 ones: _____

(c) 6 thousands 35 hundreds 1 ten 8 ones: _____

(d) 1 ten thousand 19 thousands 4 hundreds 4 tens 6 ones: _____

(e) 4 ten thousands 8 thousands 5 hundreds 13 tens 25 ones: _____

(f) 3 ten thousands 4 thousands 22 hundreds 8 tens 18 ones _____

(g) 5 ten thousands 17 thousands 29 ones _____

(h) 2 ten thousands 16 hundreds 90 ones _____

5. Fill in the missing numbers.

(a) 2759 = 2000 + 700 + _____

(b) 10 495 = 10 000 + _____ + 5

(c) 22 903 = _____ + 903

(d) 65 049 = 60 000 + _____ + 9

(e) 3000 + 400 + 1 = _____

(f) 40 000 + 9000 + 70 = _____

(g) 80 000 + 600 + 8 = _____

(h) 50 000 + 20 + 3 = _____

6. Fill in the blanks with 'ten', 'hundred' or 'thousand'.

(a) 145 is 100 when rounded to the nearest _____.

(b) 219 is 220 when rounded to the nearest _____.

(c) 875 is 880 when rounded to the nearest _____.

(d) 10 499 is 10 000 when rounded to the nearest _____.

(e) 4927 is 4900 when rounded to the nearest _____.

(f) 25 600 is 26 000 when rounded to the nearest _____.

7. Use all the digits given to form the smallest odd number.

(a) 4, 1, 3: _____ (b) 5, 0, 1: _____

(c) 6, 3, 8, 5: _____ (d) 1, 8, 2, 7: _____

8. Use all the digits given to form the smallest even number.

(a) 5, 2, 3 : _____ (b) 7, 0, 9: _____

(c) 1, 9, 8, 3 : _____ (d) 7, 9, 4, 1: _____

9. Use all the digits given to form the greatest odd number.

(a) 5, 2, 6 : _____ (b) 4, 7, 0: _____

(c) 3, 8, 0, 2: _____ (d) 4, 0, 6, 9: _____

10. Use all the digits given to form the greatest even number.

(a) 8, 3, 7: _____ (b) 9, 6, 5: _____

(c) 3, 8, 5, 9: _____ (d) 4, 5, 3, 1: _____

Exercise 2

Choose the correct answer and write its number in the brackets provided.

1. In 73 890, the digit 7 is in the _____ place.

(1) tens (2) hundreds

(3) thousands (4) ten thousands ( )

2. Which of the following numbers is a factor of 42?

(1) 8 (2) 9

(3) 3 (4) 4 ( )

3. Which of the following numbers is a common multiple of 6 and 8?
(1) 14 (2) 2
(3) 24 (4) 32 ( )

4. Which of the following numbers is a common factor of 8 and 10?
(1) 18 (2) 2
(3) 40 (4) 80 ( )

5. 8 is a common factor of _____.
(1) 2 and 4 (2) 4 and 8
(3) 8 and 12 (4) 16 and 24 ( )

6. 30 is a common multiple of _____.
(1) 4 and 6 (2) 3 and 8
(3) 3 and 10 (4) 5 and 9 ( )

7. A number when rounded to the nearest hundred is 3000. Which of the following could be the number?
(1) 3054 (2) 3011
(3) 2949 (4) 2899 ( )

8. A number when rounded to the nearest ten is 6820. Which of the following could be the number?
(1) 6829 (2) 6809
(3) 6825 (4) 6815 ( )

9. The product of all the factors of 8 is _____.
(1) 64 (2) 32
(3) 16 (4) 15 ( )

10. The sum of the first two multiples of 9 is _____.
(1) 9 (2) 18
(3) 27 (4) 38 ( )

Level 3

Exercise 1

1. How many numbers between 30 and 50 are multiples of 4?

2. How many numbers between 10 and 60 are common multiples of 6 and 9?

3. How many numbers between 35 and 70 are multiples of 8?

4. How many numbers between 10 and 40 are common multiples of 2 and 3?

5. How many even numbers between 10 and 90 are multiples of 7?

6. How many odd numbers between 5 and 30 are multiples of 3?

7. I am thinking of a 1-digit even number smaller than 5. It is a factor of 6. What is the number that I am thinking of?

_____

8. I am thinking of a 2-digit odd number. It is between 10 and 30. It is a multiple of 7. What is the number that I am thinking of?

_____

9. I am thinking of a 1-digit odd number. It is a factor of 24. It is not 1. What is the number that I am thinking of?

_____

10. I am thinking of a 2-digit even number. It is a multiple of 9. It is between 20 and 90. The digit in the tens place is smaller than the digit in the ones place. What is the number that I am thinking of?

_____

Exercise 2

1. I am thinking of a 2-digit number. It is a common multiple of 5 and 9. The digit in the ones place is smaller than the digit in the tens place. What is the number that I am thinking of?

2. I am thinking of a 2-digit number. It is a common multiple of 2 and 7. It is between 20 and 60. The digit in the tens place is twice that of the digit in the ones place. What is the number that I am thinking of?

3. I am thinking of a 2-digit number. It is a factor of 32. It is a multiple of 8. It is neither 8 nor 32. What is the number that I am thinking of?

4. Z is a 1-digit number. 12 and 18 are common multiples of 3 and Z. Z is greater than 3. What is the number Z?

5. Y is a 1-digit odd number. 28 and 42 are common multiples of 14 and Y. Y is not 1. What is the number Y?

6. X is a 1-digit number. 3 is a common factor of 12 and X. What is the largest possible value of the number X?

7. C is a 2-digit number. It is smaller than 50. 8 is a common factor of 24 and C. What is the largest possible value of the number C?

8. B is a 2-digit number. 7 is a common factor of 28 and B. What is the smallest possible value of the number B?

9. D is a 1-digit number. When I divide D by 3, there is no remainder. When I divide D by 4, the remainder is 1. What is the number D?

10. E is a 2-digit number. It can be divided exactly by 5. When I add 3 to the number, it can be divided exactly by 7. It is greater than 40 but smaller than 90. What is the number E?