

# 1 Chapter Review



## Review Key Vocabulary

power, p. 12	factor pair, p. 26	common multiples, p. 38
base, p. 12	prime factorization, p. 26	least common multiple (LCM), p. 38
exponent, p. 12	factor tree, p. 26	least common denominator (LCD), p. 42
perfect square, p. 13	Venn diagram, p. 30	
numerical expression, p. 18	common factors, p. 32	
evaluate, p. 18	greatest common factor (GCF), p. 32	
order of operations, p. 18		

## Review Examples and Exercises

### 1.1 Whole Number Operations (pp. 2–9)

Use the tens place because 203 is less than 508.

$$\begin{array}{r} 2 \\ 203 \overline{) 5081} \\ \underline{- 406} \\ 102 \end{array}$$

Divide 508 by 203: There are two groups of 203 in 508.  
Multiply 2 and 203.  
Subtract 406 from 508.

Next, bring down the 1 and divide the ones.

$$\begin{array}{r} 25 \text{ R}6 \\ 203 \overline{) 5081} \\ \underline{- 406} \downarrow \\ 1021 \\ \underline{- 1015} \\ 6 \end{array}$$

Divide 1021 by 203: There are five groups of 203 in 1021.

Multiply 5 and 203.  
Subtract 1015 from 1021.

••• The quotient of 5081 and 203 is  $25\frac{6}{203}$ .

## Exercises

Find the value of the expression. Use estimation to check your answer.

Show your work on your grid. Write your estimate and answer below.

1.  $4382 + 2899$  \_\_\_\_\_

2.  $8724 - 3568$  \_\_\_\_\_

Estimate: \_\_\_\_\_

Estimate: \_\_\_\_\_

3.  $192 \times 38$  \_\_\_\_\_

4.  $216 \div 31$  \_\_\_\_\_

Estimate: \_\_\_\_\_

Estimate: \_\_\_\_\_

## 1.2 Powers and Exponents (pp. 10–15)

Evaluate  $6^2$ .

$$6^2 = 6 \cdot 6 = 36$$

Write as repeated multiplication and simplify.

### Exercises

Find the value of the power.

You may use a calculator if you wish.

5.  $7^3$  \_\_\_\_\_

6.  $2^6$  \_\_\_\_\_

7.  $4^4$  \_\_\_\_\_

## 1.3 Order of Operations (pp. 16–21)

Evaluate  $4^3 - 15 \div 5$ .

$$\begin{aligned} 4^3 - 15 \div 5 &= 64 - 15 \div 5 \\ &= 64 - 3 \\ &= 61 \end{aligned}$$

Evaluate  $4^3$ .

Divide 15 by 5.

Subtract 3 from 64.

### Exercises

Evaluate the expression.

vertically.

Remember to use **PEMDAS** and write out each step

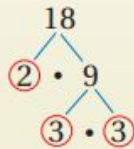
8.  $3 \times 6 - 12 \div 6$  \_\_\_\_\_

9.  $20 \times (3^2 - 4) \div 50$  \_\_\_\_\_

10.  $5 + (4^2 + 2) \div 6$  \_\_\_\_\_

**1.4 Prime Factorization** (pp. 24–29)

Write the prime factorization of 18.



Find a factor pair and draw "branches."

Circle the prime factors as you find them.

Continue until each branch ends at a prime factor.

∴ The prime factorization of 18 is  $2 \cdot 3 \cdot 3$ , or  $2 \cdot 3^2$ .

**Exercises**

List the factor pairs of the number.

11. 28 \_\_\_\_\_

12. 44 \_\_\_\_\_

13. 63 \_\_\_\_\_

**TURN OVER →**

Write the prime factorization of the number. Hint: Make a factor tree.

14. 42

\_\_\_\_\_

15. 50

\_\_\_\_\_

16. 66

\_\_\_\_\_

**1.5 Greatest Common Factor** (pp. 30–35)

a. Find the GCF of 32 and 76.

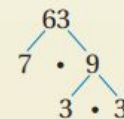
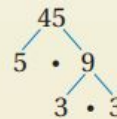
Factors of 32: ①, ②, ④, 8, 16, 32

Factors of 76: ①, ②, ④, 19, 38, 76

The greatest of the common factors is 4.

∴ So, the GCF of 32 and 76 is 4.

b. Find the GCF of 45 and 63.



$$45 = 3 \cdot 3 \cdot 5$$

$$63 = 3 \cdot 3 \cdot 7$$

$$3 \cdot 3 = 9$$

∴ So, the GCF of 45 and 63 is 9.

**Exercises**

Find the GCF of the numbers using lists of factors.

17. 27, 45 \_\_\_\_\_

27: \_\_\_\_\_

45: \_\_\_\_\_

**18.** 30, 48 \_\_\_\_\_

30: \_\_\_\_\_

48: \_\_\_\_\_

**19.** 28, 48, 64 \_\_\_\_\_

28: \_\_\_\_\_

48: \_\_\_\_\_

64: \_\_\_\_\_

**Find the GCF of the numbers using prime factorizations.**

**20.** 24, 90 \_\_\_\_\_

**21.** 52, 68 \_\_\_\_\_

**22.** 32, 56, 96 \_\_\_\_\_

## 1.6 Least Common Multiple (pp. 36–43)

### a. Find the LCM of 8 and 12.

Make a factor tree for each number.



Write the prime factorization of each number. Circle each different factor where it appears the greater number of times.

$$8 = 2 \cdot 2 \cdot 2$$

2 appears more often here, so circle all 2s.

$$12 = 2 \cdot 2 \cdot 3$$

3 appears once. Do not circle the 2s again.

$$2 \cdot 2 \cdot 2 \cdot 3 = 24$$

Find the product of the circled factors.

∴ So, the LCM of 8 and 12 is 24.

## Exercises

Find the LCM of the numbers using lists of multiples.

23. 4, 14 \_\_\_\_\_

4: \_\_\_\_\_

14: \_\_\_\_\_

24. 6, 20 \_\_\_\_\_

6: \_\_\_\_\_

20: \_\_\_\_\_

25. 12, 28 \_\_\_\_\_

12: \_\_\_\_\_

28: \_\_\_\_\_

**Find the LCM of the numbers using prime factorizations.**

26. 6, 45 \_\_\_\_\_

27. 10, 12 \_\_\_\_\_

28. 18, 27 \_\_\_\_\_





