

|  |           |
|--|-----------|
| <b>Curriculum Overview</b>                         | <b>4</b>  |
| <b>Chapter 1: Multiples and Factors</b>            | <b>6</b>  |
| 1.1 Multiples                                      | 7         |
| 1.2 Factors  | 11        |
| <b>Chapter 2: Perfect Squares and Square Roots</b> | <b>14</b> |
| 2.1 Perfect Squares                                | 15        |
| 2.2 Square Roots                                   | 18        |
| <b>Chapter 3: Integers</b>                         | <b>22</b> |
| 3.1 Identifying and Comparing Integers             | 23        |
| 3.2 Adding and Subtracting Integers                | 26        |
| <b>Chapter 4: Fractions</b>                        | <b>30</b> |
| 4.1 Representing and Comparing Fractions           | 31        |
| 4.2 Adding Fractions                               | 34        |
| 4.3 Subtracting Fractions                          | 38        |
| 4.4 Multiplying Fractions                          | 41        |
| 4.5 Dividing Fractions                             | 44        |
| <b>Chapter 5: Decimals</b>                         | <b>48</b> |
| 5.1 Adding and Subtracting Decimals                | 49        |
| 5.2 Multiplying Decimals                           | 52        |
| 5.3 Dividing Decimals                              | 55        |
| 5.4 Relating Decimals, Fractions, and Percents     | 58        |
| <b>Chapter 6: Proportional Relationships</b>       | <b>62</b> |
| 6.1 Ratios   | 63        |
| 6.2 Rates  | 67        |
| <b>Chapter 7: Measurement</b>                      | <b>70</b> |
| 7.1 Area   | 71        |
| 7.2 Volume   | 75        |
| 7.3 Surface Area                                   | 79        |

|   |            |
|---|------------|
| <b>Chapter 8: 2-D and 3-D Geometry</b>    | <b>84</b>  |
| 8.1 Properties of Quadrilaterals          | 85         |
| 8.2 Properties of Triangles               | 87         |
| 8.3 Congruent and Similar Shapes          | 91         |
| 8.4 Constructing Angles and Bisectors     | 94         |
| <b>Chapter 9: Locations and Movements</b> | <b>98</b>  |
| 9.1 Transformations                       | 99         |
| 9.2 Cartesian Coordinate Plane            | 102        |
| <b>Chapter 10: Patterning</b>             | <b>106</b> |
| 10.1 Number Patterns                      | 107        |
| 10.2 Patterns in Graphs                   | 110        |
| <b>Chapter 11: Algebra</b>                | <b>114</b> |
| 11.1 Algebraic Expressions                | 115        |
| 11.2 Algebraic Equations                  | 120        |
| <b>Chapter 12: Data Management</b>        | <b>124</b> |
| 12.1 Interpreting Graphs                  | 125        |
| 12.2 Making Graphs                        | 129        |
| <b>Chapter 13: Probability</b>            | <b>134</b> |
| 13.1 Finding Probability                  | 135        |
| 13.2 Predicting Outcomes                  | 139        |
| <b>Handy Reference</b>                    | <b>143</b> |
| <b>Answers</b>                            | <b>145</b> |

# Chapter 1

## Multiples and Factors

**Topics to be covered in this chapter:**

### 1.1 Multiples

e.g. Multiples of 5: 5, 10, 15, 20, 25, 30

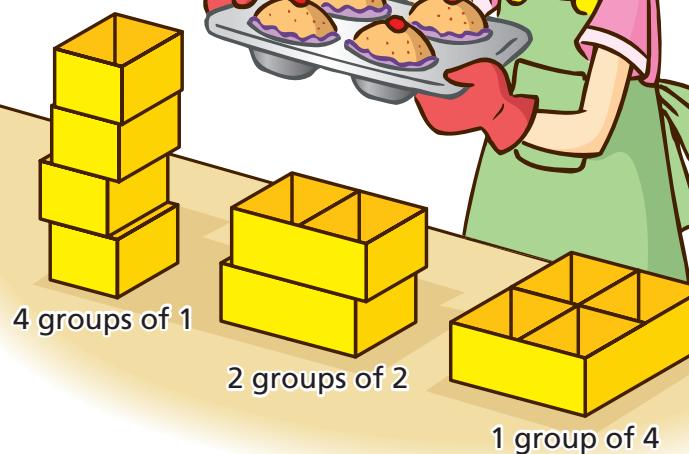
### 1.2 Factors

e.g. Factors of 6: 1, 2, 3, 6

I can pack these 4 cupcakes in 3 ways.

$4 = 1 \times 4$   
 $4 = 2 \times 2$

**Factors of 4:** 1, 2, 4



**1.1****Multiples**

Find the products. Then list the first four multiples of each number.

A multiple of an integer is the product of the integer with any other integers.

**Multiples of 2:**

2, 4, 6, 8

1.

$3 \times 1 = \underline{\hspace{2cm}}$

$3 \times 2 = \underline{\hspace{2cm}}$

$3 \times 3 = \underline{\hspace{2cm}}$

$3 \times 4 = \underline{\hspace{2cm}}$

**Multiples of 3**

2.

$4 \times 1 = \underline{\hspace{2cm}}$

$4 \times 2 = \underline{\hspace{2cm}}$

$4 \times 3 = \underline{\hspace{2cm}}$

$4 \times 4 = \underline{\hspace{2cm}}$

**Multiples of 4**

3.

$6 \times 1 = \underline{\hspace{2cm}}$

$6 \times 2 = \underline{\hspace{2cm}}$

$6 \times 3 = \underline{\hspace{2cm}}$

$6 \times 4 = \underline{\hspace{2cm}}$

**Multiples of 6**

4.

$1 \times 1 = \underline{\hspace{2cm}}$

$1 \times 2 = \underline{\hspace{2cm}}$

$1 \times 3 = \underline{\hspace{2cm}}$

$1 \times 4 = \underline{\hspace{2cm}}$

**Multiples of 1**

Do what the girl says. Then answer the questions.

5.

Follow the patterns to mark the numbers on the hundreds chart.



|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30  |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40  |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50  |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60  |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70  |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80  |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90  |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

6. The first 10 multiples of

2 :

\_\_\_\_\_

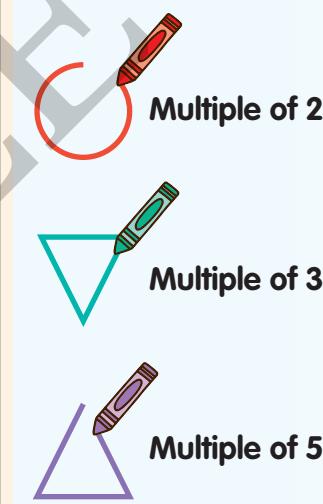
3 :

\_\_\_\_\_

5 :

\_\_\_\_\_

7. Colour all the multiples of 10. Then list them.



8. Circle the correct numbers. Then complete the Venn diagram.

a.

**Multiples of  
2**

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 10 | 34 | 24 | 90 | 75 | 42 | 65 | 33 |
| 45 | 60 | 78 | 25 | 30 | 93 | 41 | 22 |

b.

**Multiples of  
3**

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 10 | 34 | 24 | 90 | 75 | 42 | 65 | 33 |
| 45 | 60 | 78 | 25 | 30 | 93 | 41 | 22 |

c.

**Multiples of  
5**

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 10 | 34 | 24 | 90 | 75 | 42 | 65 | 33 |
| 45 | 60 | 78 | 25 | 30 | 93 | 41 | 22 |

9.

**Multiples of 2**

**Multiples of 3**

**Multiples of 5**

A common multiple is a multiple of two or more integers. The numbers in the overlapping parts are common multiples.

Common Multiples of

a. 2 and 3:

\_\_\_\_\_

b. 3 and 5:

\_\_\_\_\_

c. 2, 3, and 5:

\_\_\_\_\_

**Solve the problems. Show your work.**

10. Mr. Ashton has some planters. Each one can hold 6 pots of flowers. Write 5 possible numbers of pots Mr. Ashton could have if all of his planters are filled.

- 
11. An ice cream truck comes to Anita's neighbourhood every 4 days. If it comes on April 4, on which other days in April does it come?
- 

### Application

⑫

Gate A is opened every 6 minutes for visitors to Merryland and Gate B is opened every 8 minutes to Dreamland.

*If both gates are opened at noon, what time are both gates opened at the same time again?*

