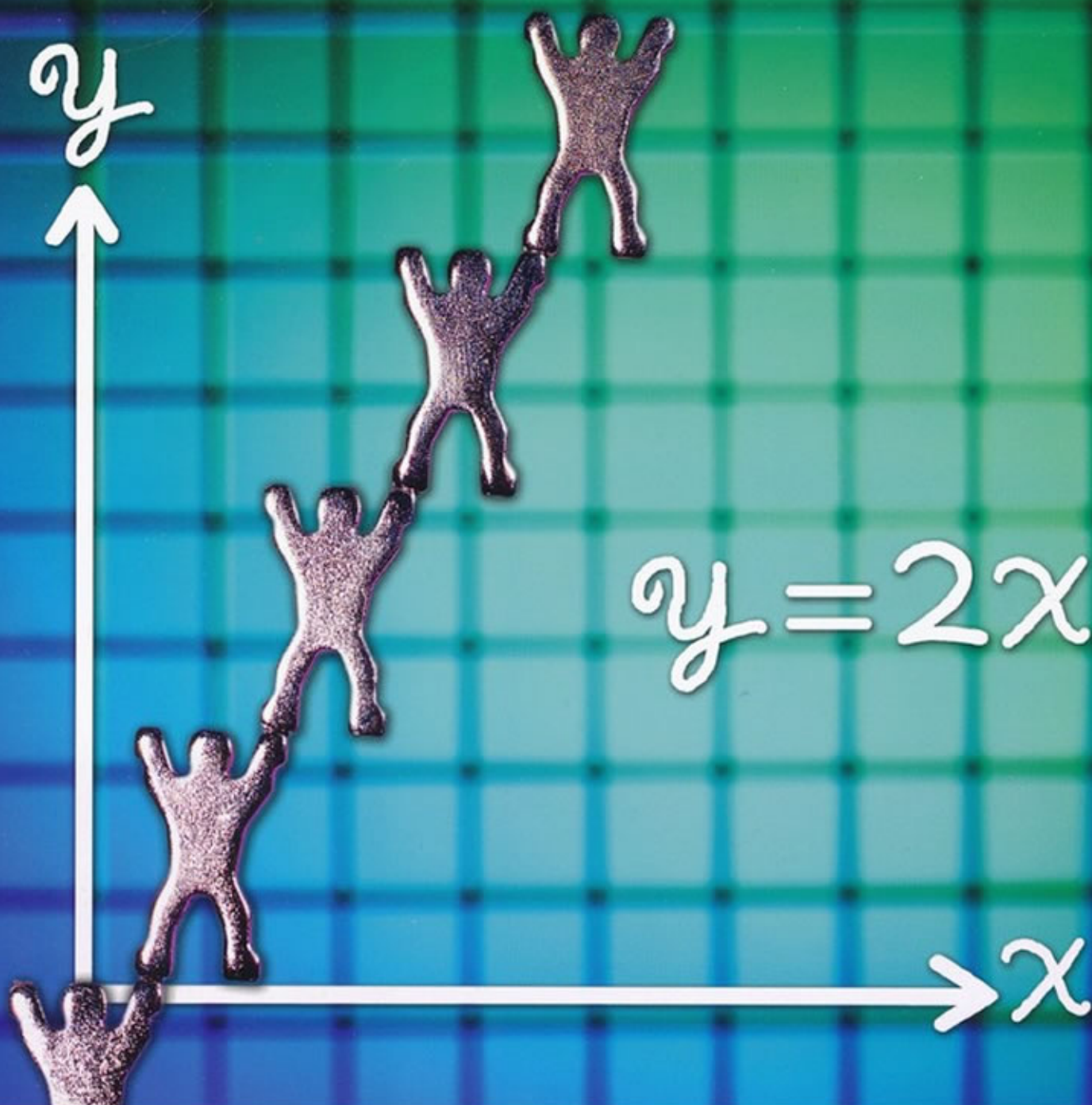


Level F

# MCP Mathematics

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# Contents

## Chapter 1 Basic Facts

|            |                                                          |    |
|------------|----------------------------------------------------------|----|
| Lesson 1-1 | Addition Facts and Properties <b>It's Algebra!</b>       | 1  |
| Lesson 1-2 | Subtraction Facts and Properties <b>It's Algebra!</b>    | 3  |
| Lesson 1-3 | Multiplication Facts and Properties <b>It's Algebra!</b> | 5  |
| Lesson 1-4 | Division Facts and Properties <b>It's Algebra!</b>       | 7  |
| Lesson 1-5 | Exponents <b>It's Algebra!</b>                           | 9  |
| Lesson 1-6 | Order of Operations <b>It's Algebra!</b>                 | 11 |
| Lesson 1-7 | ● <b>Problem Solving: Use a Four-Step Plan</b>           | 13 |
| Lesson 1-8 | Calculator: The Basic Keys                               | 15 |
|            | Chapter 1 Test                                           | 17 |
|            | ● <b>Cumulative Assessment</b>                           | 18 |

## Chapter 2 Add and Subtract Whole Numbers

|             |                                                     |    |
|-------------|-----------------------------------------------------|----|
| Lesson 2-1  | Place Value to Hundred Thousands                    | 19 |
| Lesson 2-2  | Comparing and Ordering Numbers <b>It's Algebra!</b> | 21 |
| Lesson 2-3  | Rounding Numbers                                    | 23 |
| Lesson 2-4  | Place Value to Trillions                            | 25 |
| Lesson 2-5  | Adding up to 6-Digit Numbers                        | 27 |
| Lesson 2-6  | Column Addition <b>It's Algebra!</b>                | 29 |
| Lesson 2-7  | Subtracting up to 6-Digit Numbers                   | 31 |
| Lesson 2-8  | Subtracting From Zeros                              | 33 |
| Lesson 2-9  | Estimating Sums and Differences                     | 35 |
| Lesson 2-10 | ● <b>Problem Solving: Draw a Diagram</b>            | 37 |
|             | Chapter 2 Test                                      | 39 |
|             | ● <b>Cumulative Assessment</b>                      | 40 |

## Chapter 3 Multiply Whole Numbers

|            |                                                                   |    |
|------------|-------------------------------------------------------------------|----|
| Lesson 3-1 | Multiplying by Multiples of 10                                    | 41 |
| Lesson 3-2 | Estimating Products                                               | 43 |
| Lesson 3-3 | Multiplying by a 1-Digit Factor                                   | 45 |
| Lesson 3-4 | Multiplying up to 6-Digit Numbers                                 | 47 |
| Lesson 3-5 | Multiplying by Tens                                               | 49 |
| Lesson 3-6 | Multiplying by a 2-Digit Factor                                   | 51 |
| Lesson 3-7 | Multiplying by Hundreds                                           | 53 |
| Lesson 3-8 | Multiplying by a 3-Digit Factor                                   | 55 |
| Lesson 3-9 | ● <b>Problem Solving: Look for a Pattern</b> <b>It's Algebra!</b> | 57 |
|            | Chapter 3 Test                                                    | 59 |
|            | ● <b>Cumulative Assessment</b>                                    | 60 |

## Chapter 4 Divide Whole Numbers

|            |                                |    |
|------------|--------------------------------|----|
| Lesson 4-1 | Dividing With Multiples of 10  | 61 |
| Lesson 4-2 | Dividing by a 1-Digit Divisor  | 63 |
| Lesson 4-3 | Dividing up to 7-Digit Numbers | 65 |
| Lesson 4-4 | Zeros in the Quotient          | 67 |
| Lesson 4-5 | Short Division                 | 69 |



|             |                                      |    |
|-------------|--------------------------------------|----|
| Lesson 4-6  | Finding the Average                  | 71 |
| Lesson 4-7  | Dividing by Multiples of 10          | 73 |
| Lesson 4-8  | Dividing by a 2-Digit Divisor        | 75 |
| Lesson 4-9  | Estimating Quotients                 | 77 |
| Lesson 4-10 | Dividing up to 6-Digit Numbers       | 79 |
| Lesson 4-11 | Dividing by a 3-Digit Divisor        | 81 |
| Lesson 4-12 | ● <b>Problem Solving: Act It Out</b> | 83 |
|             | Chapter 4 Test                       | 85 |
|             | ● <b>Cumulative Assessment</b>       | 86 |

## Chapter 5 Number Theory and Fractions

|             |                                                       |     |
|-------------|-------------------------------------------------------|-----|
| Lesson 5-1  | Least Common Multiple                                 | 87  |
| Lesson 5-2  | Greatest Common Factor                                | 89  |
| Lesson 5-3  | Prime and Composite Numbers                           | 91  |
| Lesson 5-4  | Factoring for Primes                                  | 93  |
| Lesson 5-5  | Fractions                                             | 95  |
| Lesson 5-6  | Equivalent Fractions                                  | 97  |
| Lesson 5-7  | Simplifying Fractions                                 | 99  |
| Lesson 5-8  | Renaming Mixed Numbers                                | 101 |
| Lesson 5-9  | Renaming Improper Fractions                           | 103 |
| Lesson 5-10 | Comparing and Ordering Fractions <i>It's Algebra!</i> | 105 |
| Lesson 5-11 | ● <b>Problem Solving: Make a Table</b>                | 107 |
| Lesson 5-12 | Calculator: Cross Products                            | 109 |
|             | Chapter 5 Test                                        | 111 |
|             | ● <b>Cumulative Assessment</b>                        | 112 |

## Chapter 6 Add and Subtract Fractions

|             |                                                  |     |
|-------------|--------------------------------------------------|-----|
| Lesson 6-1  | Estimating Sums and Differences of Mixed Numbers | 113 |
| Lesson 6-2  | Adding Fractions and Mixed Numbers               | 115 |
| Lesson 6-3  | Adding Fractions With Unlike Denominators        | 117 |
| Lesson 6-4  | Renaming Mixed Numbers in Sums                   | 119 |
| Lesson 6-5  | Subtracting Fractions and Mixed Numbers          | 121 |
| Lesson 6-6  | Subtracting Fractions With Unlike Denominators   | 123 |
| Lesson 6-7  | Subtracting Mixed Numbers With Regrouping        | 125 |
| Lesson 6-8  | Subtracting With Renaming and Regrouping         | 127 |
| Lesson 6-9  | Practice Adding and Subtracting Fractions        | 129 |
| Lesson 6-10 | ● <b>Problem Solving: Try, Check, and Revise</b> | 131 |
| Lesson 6-11 | Calculator: Formulas <i>It's Algebra!</i>        | 133 |
|             | Chapter 6 Test                                   | 135 |
|             | ● <b>Cumulative Assessment</b>                   | 136 |

## Chapter 7 Multiply and Divide Fractions

|            |                                   |     |
|------------|-----------------------------------|-----|
| Lesson 7-1 | Multiplying Fractions             | 137 |
| Lesson 7-2 | Factoring Before Multiplying      | 139 |
| Lesson 7-3 | Multiplying Mixed Numbers         | 141 |
| Lesson 7-4 | Reciprocals                       | 143 |
| Lesson 7-5 | Dividing Fractions                | 145 |
| Lesson 7-6 | Dividing Mixed Numbers            | 147 |
| Lesson 7-7 | Estimating Products and Quotients | 149 |

|             |                                                             |     |
|-------------|-------------------------------------------------------------|-----|
| Lesson 7-8  | Practice With Fractions . . . . .                           | 151 |
| Lesson 7-9  | ● <b>Problem Solving:</b> Solve a Simpler Problem . . . . . | 153 |
| Lesson 7-10 | Calculator: Functions <b>It's Algebra!</b> . . . . .        | 155 |
|             | Chapter 7 Test . . . . .                                    | 157 |
|             | ● <b>Cumulative Assessment</b> . . . . .                    | 158 |

## Chapter 8 Add and Subtract Decimals

|             |                                                                |     |
|-------------|----------------------------------------------------------------|-----|
| Lesson 8-1  | Tenths and Hundredths <b>It's Algebra!</b> . . . . .           | 159 |
| Lesson 8-2  | Thousandths . . . . .                                          | 161 |
| Lesson 8-3  | Place Value to Millionths . . . . .                            | 163 |
| Lesson 8-4  | Comparing and Ordering Decimals <b>It's Algebra!</b> . . . . . | 165 |
| Lesson 8-5  | Rounding Decimals . . . . .                                    | 167 |
| Lesson 8-6  | Estimating Sums and Differences <b>It's Algebra!</b> . . . . . | 169 |
| Lesson 8-7  | Adding Decimals . . . . .                                      | 171 |
| Lesson 8-8  | Subtracting Decimals . . . . .                                 | 173 |
| Lesson 8-9  | Practice Adding and Subtracting Decimals . . . . .             | 175 |
| Lesson 8-10 | ● <b>Problem Solving:</b> Draw a Diagram . . . . .             | 177 |
|             | Chapter 8 Test . . . . .                                       | 179 |
|             | ● <b>Cumulative Assessment</b> . . . . .                       | 180 |

## Chapter 9 Multiply and Divide Decimals

|             |                                                   |     |
|-------------|---------------------------------------------------|-----|
| Lesson 9-1  | Multiplying by Powers of 10 . . . . .             | 181 |
| Lesson 9-2  | Estimating Decimal Products . . . . .             | 183 |
| Lesson 9-3  | Multiplying Whole Numbers by Decimals . . . . .   | 185 |
| Lesson 9-4  | Multiplying Decimals by Decimals . . . . .        | 187 |
| Lesson 9-5  | Zeros in the Product . . . . .                    | 189 |
| Lesson 9-6  | Dividing a Decimal by a Whole Number . . . . .    | 191 |
| Lesson 9-7  | Zeros in the Quotient . . . . .                   | 193 |
| Lesson 9-8  | Dividing by Powers of 10 . . . . .                | 195 |
| Lesson 9-9  | Dividing Decimals by Decimals . . . . .           | 197 |
| Lesson 9-10 | Zeros in the Dividend . . . . .                   | 199 |
| Lesson 9-11 | Rounding Quotients . . . . .                      | 201 |
| Lesson 9-12 | Renaming Fractions as Decimals . . . . .          | 203 |
| Lesson 9-13 | ● <b>Problem Solving:</b> Work Backward . . . . . | 205 |
| Lesson 9-14 | Calculator: Repeating Decimals . . . . .          | 207 |
|             | Chapter 9 Test . . . . .                          | 209 |
|             | ● <b>Cumulative Assessment</b> . . . . .          | 210 |

## Chapter 10 Measurement

|             |                                                                                 |     |
|-------------|---------------------------------------------------------------------------------|-----|
| Lesson 10-1 | Units of Time . . . . .                                                         | 211 |
| Lesson 10-2 | Reading Schedules . . . . .                                                     | 213 |
| Lesson 10-3 | Adding and Subtracting Customary Units of Length <b>It's Algebra!</b> . . . . . | 215 |
| Lesson 10-4 | Customary Units of Capacity and Weight . . . . .                                | 217 |
| Lesson 10-5 | Metric Units of Length . . . . .                                                | 219 |
| Lesson 10-6 | Metric Units of Capacity and Mass . . . . .                                     | 221 |
| Lesson 10-7 | Fahrenheit and Celsius Temperatures <b>It's Algebra!</b> . . . . .              | 223 |
| Lesson 10-8 | ● <b>Problem Solving:</b> Use a Formula <b>It's Algebra!</b> . . . . .          | 225 |
|             | Chapter 10 Test . . . . .                                                       | 227 |
|             | ● <b>Cumulative Assessment</b> . . . . .                                        | 228 |



## Chapter 11 Geometry

|              |                                        |     |
|--------------|----------------------------------------|-----|
| Lesson 11-1  | Basic Geometric Ideas                  | 229 |
| Lesson 11-2  | Classifying Angles                     | 231 |
| Lesson 11-3  | Measuring Angles                       | 233 |
| Lesson 11-4  | Lines and Angles                       | 235 |
| Lesson 11-5  | Parts of a Circle                      | 237 |
| Lesson 11-6  | Bisecting Line Segments and Angles     | 239 |
| Lesson 11-7  | Copying Line Segments and Angles       | 241 |
| Lesson 11-8  | Classifying Polygons                   | 243 |
| Lesson 11-9  | Classifying Triangles                  | 245 |
| Lesson 11-10 | Classifying Quadrilaterals             | 247 |
| Lesson 11-11 | Congruent Polygons                     | 249 |
| Lesson 11-12 | Graphing Ordered Pairs                 | 251 |
| Lesson 11-13 | Transformations                        | 253 |
| Lesson 11-14 | ● Problem Solving: Restate the Problem | 255 |
|              | Chapter 11 Test                        | 257 |
|              | ● Cumulative Assessment                | 258 |

## Chapter 12 Perimeter, Area, and Volume

|              |                                                     |     |
|--------------|-----------------------------------------------------|-----|
| Lesson 12-1  | Perimeter <i>It's Algebra!</i>                      | 259 |
| Lesson 12-2  | Circumference <i>It's Algebra!</i>                  | 261 |
| Lesson 12-3  | Area of Rectangles and Squares <i>It's Algebra!</i> | 263 |
| Lesson 12-4  | Relating Area and Perimeter <i>It's Algebra!</i>    | 265 |
| Lesson 12-5  | Area of Parallelograms <i>It's Algebra!</i>         | 267 |
| Lesson 12-6  | Area of Triangles <i>It's Algebra!</i>              | 269 |
| Lesson 12-7  | Area of Circles <i>It's Algebra!</i>                | 271 |
| Lesson 12-8  | Solid Figures <i>It's Algebra!</i>                  | 273 |
| Lesson 12-9  | Volume <i>It's Algebra!</i>                         | 275 |
| Lesson 12-10 | Surface Area <i>It's Algebra!</i>                   | 277 |
| Lesson 12-11 | ● Problem Solving: Identify a Subgoal               | 279 |
|              | Chapter 12 Test                                     | 281 |
|              | ● Cumulative Assessment                             | 282 |

## Chapter 13 Ratio and Percent

|              |                                            |     |
|--------------|--------------------------------------------|-----|
| Lesson 13-1  | Writing Ratios                             | 283 |
| Lesson 13-2  | Equal Ratios                               | 285 |
| Lesson 13-3  | Solving Proportions <i>It's Algebra!</i>   | 287 |
| Lesson 13-4  | Similar Polygons <i>It's Algebra!</i>      | 289 |
| Lesson 13-5  | Scale Drawings <i>It's Algebra!</i>        | 291 |
| Lesson 13-6  | Percents                                   | 293 |
| Lesson 13-7  | Renaming Fractions, Decimals, and Percents | 295 |
| Lesson 13-8  | Finding a Percent of a Number              | 297 |
| Lesson 13-9  | Percent Increase and Decrease              | 299 |
| Lesson 13-10 | Simple Interest                            | 301 |
| Lesson 13-11 | ● Problem Solving: Collect Data            | 303 |
| Lesson 13-12 | Calculator: Discount and Sale Price        | 305 |
|              | Chapter 13 Test                            | 307 |
|              | ● Cumulative Assessment                    | 308 |



**Chapter 14** Graphs and Probability

|              |                                             |     |
|--------------|---------------------------------------------|-----|
| Lesson 14-1  | Stem-and-Leaf Plots                         | 309 |
| Lesson 14-2  | Double-Bar Graphs                           | 311 |
| Lesson 14-3  | Double-Line Graphs                          | 313 |
| Lesson 14-4  | Circle Graphs                               | 315 |
| Lesson 14-5  | Histograms                                  | 317 |
| Lesson 14-6  | Probability                                 | 319 |
| Lesson 14-7  | Sample Space                                | 321 |
| Lesson 14-8  | Compound Probability                        | 323 |
| Lesson 14-9  | Multiplying Probabilities                   | 325 |
| Lesson 14-10 | Making Predictions                          | 327 |
| Lesson 14-11 | ● <b>Problem Solving: Misleading Graphs</b> | 329 |
|              | Chapter 14 Test                             | 331 |
|              | ● <b>Cumulative Assessment</b>              | 332 |

**Chapter 15** Integers

|             |                                                                  |     |
|-------------|------------------------------------------------------------------|-----|
| Lesson 15-1 | Integers <b>It's Algebra!</b>                                    | 333 |
| Lesson 15-2 | Comparing and Ordering Integers <b>It's Algebra!</b>             | 335 |
| Lesson 15-3 | Adding Integers With Like Signs <b>It's Algebra!</b>             | 337 |
| Lesson 15-4 | Adding Integers With Unlike Signs <b>It's Algebra!</b>           | 339 |
| Lesson 15-5 | Subtracting Integers <b>It's Algebra!</b>                        | 341 |
| Lesson 15-6 | Multiplying Integers <b>It's Algebra!</b>                        | 343 |
| Lesson 15-7 | Dividing Integers <b>It's Algebra!</b>                           | 345 |
| Lesson 15-8 | ● <b>Problem Solving: Logical Reasoning</b> <b>It's Algebra!</b> | 347 |
|             | Chapter 15 Test                                                  | 349 |
|             | ● <b>Cumulative Assessment</b>                                   | 350 |

**Chapter 16** Equations

|             |                                                                          |     |
|-------------|--------------------------------------------------------------------------|-----|
| Lesson 16-1 | Algebraic Expressions <b>It's Algebra!</b>                               | 351 |
| Lesson 16-2 | Addition and Subtraction Equations <b>It's Algebra!</b>                  | 353 |
| Lesson 16-3 | Multiplication and Division Equations <b>It's Algebra!</b>               | 355 |
| Lesson 16-4 | Solving Two-Step Equations <b>It's Algebra!</b>                          | 357 |
| Lesson 16-5 | Graphing Ordered Pairs of Integers <b>It's Algebra!</b>                  | 359 |
| Lesson 16-6 | Graphing a Table of Values <b>It's Algebra!</b>                          | 361 |
| Lesson 16-7 | Graphing Equations <b>It's Algebra!</b>                                  | 363 |
| Lesson 16-8 | ● <b>Problem Solving: Review the Four-Step Plan</b> <b>It's Algebra!</b> | 365 |
|             | Chapter 16 Test                                                          | 367 |
|             | ● <b>Cumulative Assessment</b>                                           | 368 |

|                    |     |
|--------------------|-----|
| Glossary           | 369 |
| Tables of Measures | 374 |
| Index              | 376 |

Name \_\_\_\_\_

## Basic Facts

## Lesson 1-1

It's Algebra!

## Addition Facts and Properties

The Cubs won the Little League District Championship. How many games did they play?

We want to know how many games the Cubs played.

We know the Cubs won \_\_\_\_\_ games and lost \_\_\_\_\_ games.

To find the total games played, we add the games won and the games lost. We add \_\_\_\_\_ and \_\_\_\_\_.

$$\begin{array}{c} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \uparrow \quad \uparrow \quad \uparrow \\ \text{addends} \quad \text{sum} \end{array}$$

The Cubs played \_\_\_\_\_ games in all.

Understanding the basic properties of addition makes it easier to find sums.

**Commutative Property**

Two numbers can be added in any order without affecting the sum. Addends can be grouped in any order without affecting the sum.

**Associative Property**

Addends can be grouped in any order without affecting the sum.

**Identity Property**

When zero is one of two addends, the sum is the other addend.

|         | Won | Lost |
|---------|-----|------|
| Cubs    | 9   | 6    |
| Pirates | 8   | 7    |
| Cards   | 5   | 9    |
| Giants  | 6   | 8    |



## Getting Started

Find each sum.

1.  $6 + 4 = \underline{\quad}$       2.  $8 + 8 = \underline{\quad}$       3.  $9 + 0 = \underline{\quad}$       4.  $7 + 1 = \underline{\quad}$

Add. Check by adding in the reverse order.

5.  $\begin{array}{r} 3 \\ + 8 \\ \hline \end{array}$       6.  $\begin{array}{r} 5 \\ + 4 \\ \hline \end{array}$       7.  $\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$       8.  $\begin{array}{r} 7 \\ 1 \\ + 8 \\ \hline \end{array}$       9.  $\begin{array}{r} 3 \\ 6 \\ + 5 \\ \hline \end{array}$       10.  $\begin{array}{r} 7 \\ 8 \\ + 0 \\ \hline \end{array}$

## Practice

Find each sum.

1.  $4 + 4 = \underline{\quad}$

2.  $7 + 5 = \underline{\quad}$

3.  $3 + 7 = \underline{\quad}$

4.  $9 + 3 = \underline{\quad}$

5.  $2 + 8 = \underline{\quad}$

6.  $8 + 6 = \underline{\quad}$

7.  $7 + 6 = \underline{\quad}$

8.  $0 + 5 = \underline{\quad}$

9.  $6 + 3 = \underline{\quad}$

10.  $8 + 2 = \underline{\quad}$

11.  $8 + 9 = \underline{\quad}$

12.  $3 + 6 = \underline{\quad}$

13.  $9 + 7 = \underline{\quad}$

14.  $3 + 2 = \underline{\quad}$

15.  $9 + 4 = \underline{\quad}$

16.  $7 + 7 = \underline{\quad}$

17.  $1 + 7 = \underline{\quad}$

18.  $4 + 8 = \underline{\quad}$

19.  $5 + 6 = \underline{\quad}$

20.  $7 + 8 = \underline{\quad}$

Add. Check by adding in the reverse order.

21. 
$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 0 \\ + 0 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 7 \\ + 4 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 5 \\ + 2 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 4 \\ 3 \\ + 2 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 1 \\ 6 \\ + 8 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 6 \\ 3 \\ + 5 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} 8 \\ 1 \\ + 3 \\ \hline \end{array}$$

31. 
$$\begin{array}{r} 5 \\ 0 \\ + 8 \\ \hline \end{array}$$

32. 
$$\begin{array}{r} 5 \\ 2 \\ + 5 \\ \hline \end{array}$$

33. 
$$\begin{array}{r} 0 \\ + 9 \\ \hline \end{array}$$

34. 
$$\begin{array}{r} 5 \\ + 1 \\ \hline \end{array}$$

35. 
$$\begin{array}{r} 2 \\ + 4 \\ \hline \end{array}$$

36. 
$$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$$

37. 
$$\begin{array}{r} 4 \\ + 6 \\ \hline \end{array}$$

38. 
$$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$$

## Problem Solving

Solve each problem.

39. Chris paid \$6 to see a football game. He paid \$2 to park his car. How much did he pay altogether?

41. In a football game, Walt scored a field goal for 3 points. Hal ran for a touchdown and kicked the extra point for 7 points altogether. How many points did both boys score?

43. Annie earned \$5 babysitting on Friday and \$9 on Saturday. How much did she earn in all?

40. Ellie scored 3 soccer goals in the first half and 2 soccer goals in the second half. How many goals did Ellie score?

42. Mickey ran 5 kilometers on Monday, 3 kilometers on Tuesday, and 8 kilometers on Friday. How far did he run during the week?

44. Ryan's ski class met for 2 hours before lunch and 1 hour after lunch. How many hours did he ski with his class?



# Subtraction Facts and Properties

It's Algebra!

Lynn is buying a new calculator. She pays for it with a ten-dollar bill. How much change will she receive?

We want to know how much change Lynn will receive.

We know she gives the clerk \_\_\_\_\_ and the calculator costs \_\_\_\_\_.

To find the difference, we subtract the cost of the calculator from the amount Lynn has. We subtract \_\_\_\_\_ from \_\_\_\_\_.

$$\begin{array}{ccc} \underline{\quad} & - & \underline{\quad} = \underline{\quad} \\ \uparrow & \uparrow & \uparrow \\ \text{minuend} & \text{subtrahend} & \text{difference} \end{array}$$

Lynn receives \_\_\_\_\_ in change.

Understanding the relationship between addition and subtraction makes it easier to find sums and differences.

Addition and subtraction check each other. They are called **inverse operations**.

Any three numbers can be used to write four related facts called a **fact family**.

$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$$

Using related facts helps you find missing numbers in equations.

$$7 + ? = 10 \quad 10 - 7 = \underline{\quad}$$



## Getting Started

Find each difference.

$$1. 11 - 3 = \underline{\quad} \quad 2. 16 - 8 = \underline{\quad} \quad 3. 4 - 0 = \underline{\quad} \quad 4. 7 - 7 = \underline{\quad}$$

Solve. Check by using the inverse operation.

$$5. \begin{array}{r} 8 \\ - 5 \\ \hline \end{array} \quad 6. \begin{array}{r} 14 \\ - 6 \\ \hline \end{array} \quad 7. \begin{array}{r} 0 \\ - 0 \\ \hline \end{array}$$

Write the missing addend.

$$8. 6 + \underline{\quad} = 9 \quad 9. 0 + \underline{\quad} = 6$$

## Practice

Find each difference.

1.  $9 - 6 = \underline{\quad}$

2.  $14 - 9 = \underline{\quad}$

3.  $9 - 5 = \underline{\quad}$

4.  $15 - 6 = \underline{\quad}$

5.  $7 - 2 = \underline{\quad}$

6.  $13 - 7 = \underline{\quad}$

7.  $17 - 9 = \underline{\quad}$

8.  $5 - 2 = \underline{\quad}$

9.  $10 - 9 = \underline{\quad}$

10.  $18 - 9 = \underline{\quad}$

11.  $3 - 3 = \underline{\quad}$

12.  $10 - 4 = \underline{\quad}$

13.  $7 - 0 = \underline{\quad}$

14.  $13 - 6 = \underline{\quad}$

15.  $15 - 7 = \underline{\quad}$

16.  $11 - 7 = \underline{\quad}$

Solve. Check by using the inverse operation.

17. 
$$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 14 \\ -7 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 8 \\ -0 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 12 \\ -3 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 8 \\ -1 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 14 \\ -5 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 6 \\ -0 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 10 \\ -8 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} 16 \\ -7 \\ \hline \end{array}$$

31. 
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

32. 
$$\begin{array}{r} 12 \\ -6 \\ \hline \end{array}$$

33. 
$$\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$$

34. 
$$\begin{array}{r} 13 \\ -8 \\ \hline \end{array}$$

Write each missing addend.

35.  $\underline{\quad} + 7 = 16$

36.  $\underline{\quad} + 9 = 15$

37.  $5 + \underline{\quad} = 12$

38.  $\underline{\quad} + 9 = 16$

39.  $8 + \underline{\quad} = 17$

40.  $5 + \underline{\quad} = 13$

41.  $\underline{\quad} + 0 = 4$

42.  $7 + \underline{\quad} = 11$

43.  $\underline{\quad} + 8 = 16$

44.  $1 + \underline{\quad} = 7$

45.  $\underline{\quad} + 2 = 11$

46.  $2 + \underline{\quad} = 10$

47.  $6 + \underline{\quad} = 9$

48.  $\underline{\quad} + 8 = 15$

49.  $3 + \underline{\quad} = 6$

50.  $\underline{\quad} + 1 = 3$

## Problem Solving

Solve each problem.

51. Alan bought one tape for \$9. He bought a poster for \$17. How much more did the poster cost?

53. Sandi had 16 records in her collection. She gave 7 records to her brother. How many records did Sandi have left?

52. Paula bought a belt for \$8 and a pair of socks for \$3. How much more did the belt cost?

54. Robert had 12 pictures to take. He took 3 pictures on Friday. How many pictures did Robert still have left to take?



# Multiplication Facts and Properties

It's Algebra!

The sixth-grade class is going on a field trip to the Natural History Museum. Five students can ride in each car. How many students can go on the field trip?

We need to know how many students can go on the trip.

There are \_\_\_\_\_ cars and \_\_\_\_\_ students can go in each car.

To find the total number of students who can go on the trip, we multiply the number of students in each car by the number of cars. We multiply \_\_\_\_\_ times \_\_\_\_\_.

$$\begin{array}{ccc} \underline{\quad} & \times & \underline{\quad} = \underline{\quad} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

\_\_\_\_\_ students can go on the field trip.

Understanding the basic properties of multiplication makes it easier to find products.



## Commutative Property

Two numbers can be multiplied in any order.

$$6 \times 8 = \underline{\quad} \quad 8 \times 6 = \underline{\quad}$$

## Associative Property

Factors can be grouped in any way.

$$(4 \times 2) \times 5 = \underline{\quad} \quad 4 \times (2 \times 5) = \underline{\quad}$$

## Zero Property

When zero is one of the factors the product is zero.

$$5 \times 0 = \underline{\quad} \quad 0 \times 5 = \underline{\quad}$$

## Identity Property

When 1 is one of the two factors, the product is the other factor.

$$7 \times 1 = \underline{\quad} \quad 1 \times 7 = \underline{\quad}$$

## Getting Started

Find each product.

1.  $7 \times 8 = \underline{\quad}$
2.  $9 \times 0 = \underline{\quad}$
3.  $1 \times 6 = \underline{\quad}$
4.  $5 \times (2 \times 3) = \underline{\quad}$

Multiply. Check by multiplying in the reverse order.

$$\begin{array}{r} 5. \quad 6 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 7 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 8 \\ \times 9 \\ \hline \end{array}$$