

Table of Contents

Introduction	4
------------------------	---

Natural Numbers and Decimals

Natural Numbers and Decimals	5
Rational and Irrational Decimals	6
Rounding Decimals	7
Estimating Decimal Products and Quotients	8
Multiplying Decimals	9
Dividing Decimals	10
Exponents	11
Exponential Notation	12

Factors and Fractions

Divisibility	13
Factors, Primes, and Composites	14
Prime Factorization	15
Least Common Multiple	16
Greatest Common Factor	17
Simplifying Fractions	18
Functions	19
Comparing Fractions	20
Improper Fraction to Mixed Number	21
Mixed Number to Improper Fraction	22
Adding and Subtracting Fractions	23
Adding Mixed Numbers	24
Subtracting Mixed Numbers	25
Factors and Fractions	26
Fractions to Percents	27
Multiplying Fractions	28
Multiplying Mixed Numbers	29
Dividing Fractions	30
Dividing Mixed Numbers	31
Multistep Problems	32
Along the Way	33
Altogether	34

Algebra

Variables	35
Associative and Commutative Properties	36
Distributive Property	37
Order of Operations	38
Inverse Operations	39
Inverse Operations: Addition	40
Inverse Operations: Subtraction	41
Inverse Operations: Multiplication	42
Inverse Operations: Division	43
Variables 2	44
Inequalities	45
Graphing Inequalities	46

Geometry

Lines and Line Segments	47
Angles	48
Angle Measurement	49
Geometry Terms	50
Polygons	51
Similar and Congruent	52
Similar Triangles	53
Similar Figures	54
Parts of a Circle	55
Geometric Solids	56
Spatial Relationships	57
Angles, Circles, and Solids	58
The X, Y Axis	59
Using a Cartesian Plane	60
Reflections Across the X-Axis	61
Reflections Across the Y-Axis	62
Translations Along the X-Axis	63
Translations Along the Y-Axis	64
Oblique Translations	65
Transformations	66
Perimeter	67
Area	68
Area of a Triangle and Trapezoid	69
Circumference	70

Area of Circles	71
Area and Circumference of Circles	72
Points, Shapes, and Solids	73

Ratio and Proportion

Ratios	74
Rates	75
Proportions	76
Cross Multiplication	77
Proportions 2	78
Unit Price	79
Ratio and Proportion	80

Data Analysis and Problem Solving

Percent	81
Fractions, Decimals, and Percents	82
More Fractions, Decimals, and Percents	83
Percent of a Number	84
Data Analysis	85
Mean, Median, Mode, and Range	86
Reading Tables	87
Reading Line Graphs	88
Creating a Circle Graph	89
Scatter Plots	90
Reading Graphs	91
The Bottom Line	92

Integers

Defining Integers	93
Absolute Value	94
Adding Integers	95
Subtracting Integers	96
Exploring Linear Equations	97
Positive and Negative	98

Rational Numbers

Terminating Decimals	99
Repeating Decimals	100
Comparing Rational Numbers	101
The Density Property	102
Scientific Notation	103
Your Checkbook	104
Be Rational!	105

Probability

Combinations	106
Permutations	107
Impossible and Certain	108
Calculating Chance	109

Answer Key	110
-----------------------------	------------

Introduction

Each book in the Power Practice™ series contains dozens of ready-to-use activity pages to provide students with skill practice. The fun activities can be used to supplement and enhance what you are already teaching in your classroom. Give an activity page to students as independent class work, or send the pages home as homework to reinforce skills taught in class. An answer key is included at the end of each book to provide verification of student responses.

Standards-Based Math 7–8 provides activities that will directly assist students in practicing basic skills and concepts. The structure of the book enhances student learning and enables them to meet the next challenge with confidence. Students will receive reinforcement in skills from the following math strands:

- Natural Numbers and Decimals
- Factors and Fractions
- Algebra
- Geometry
- Ratio and Proportion
- Data Analysis and Problem Solving
- Integers
- Rational Numbers
- Probability

Use these ready-to-go activities to "recharge" skill review and give students the power to succeed!

Natural Numbers and Decimals

NATURAL NUMBERS AND DECIMALS

Natural numbers are the counting numbers. They are greater than zero and represent only whole quantities. **Decimals** represent some part of a whole. Example: 3.5 represents three wholes and one-half of a whole.

Identify each as a natural number or decimal.

1 15.0

2 98.6

3 164

4 $74.\overline{6}$

5 9020.00

6 182.75

7 98.33

8 334.433

Solve.

9
$$\begin{array}{r} 273 \\ \times 975 \\ \hline \end{array}$$

10
$$\begin{array}{r} 564 \\ \times 328 \\ \hline \end{array}$$

11
$$\begin{array}{r} 987 \\ \times 225 \\ \hline \end{array}$$

12
$$\begin{array}{r} 619 \\ \times 278 \\ \hline \end{array}$$

13
$$\begin{array}{r} 369 \\ \times 751 \\ \hline \end{array}$$

14
$$\begin{array}{r} 462 \\ \times 354 \\ \hline \end{array}$$

15
$$\begin{array}{r} 826 \\ \times 391 \\ \hline \end{array}$$

16
$$\begin{array}{r} 198 \\ \times 743 \\ \hline \end{array}$$

17
$$\begin{array}{r} 592 \\ \times 489 \\ \hline \end{array}$$

18
$$\begin{array}{r} 1295 \\ \times 336 \\ \hline \end{array}$$

19
$$\begin{array}{r} 3840 \\ \times 585 \\ \hline \end{array}$$

20
$$\begin{array}{r} 6067 \\ \times 241 \\ \hline \end{array}$$

Rational and Irrational Decimals

NATURAL NUMBERS AND DECIMALS

Decimals that are **rational numbers** can be turned into either repeating or terminating decimals.

- 0.5 and 0.25 are terminating decimals.
- $0.\overline{3}$, $0.1\overline{6}$, and $0.14\overline{2857}$ are repeating decimals with a pattern that never ends.

Decimals that are **irrational numbers** go beyond the point that we can calculate them.

- $\sqrt{7} = 2.645751311064590501615753639260425710259183082450180368 \dots$
- $\pi = 3.14159265358979323846264338327950288419716939937510582097 \dots$

Translate each fraction or square root into a decimal. Write each fraction from the fraction box beneath the appropriate heading. Find the irrational numbers and write them under the appropriate heading.

Fraction Box															
$\frac{1}{2}$	$\frac{1}{3}$	$\sqrt{9}$	$\frac{1}{4}$	$\frac{1}{5}$	$\sqrt{25}$	$\frac{1}{6}$	$\frac{1}{7}$	\neq	$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$	$\sqrt{2}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{2}{5}$
$\frac{5}{6}$	$\sqrt{5}$	$\frac{2}{7}$	$\frac{5}{7}$	$\sqrt{3}$	$\frac{3}{8}$	$\frac{2}{9}$	$\sqrt{6}$	$\frac{7}{9}$	$\frac{3}{10}$	$\sqrt{4}$	$\frac{3}{5}$	$\frac{6}{7}$	$\frac{5}{8}$	$\frac{4}{9}$	$\frac{8}{9}$

Terminating	Repeating
Irrational	

Did you know? The philosopher Hippasus used geometric methods to prove that $\sqrt{2}$ is irrational. This so irritated the other mathematical philosophers that they threw him overboard. How's that for irrational?

Rounding Decimals

NATURAL NUMBERS AND DECIMALS

2	4	1	6	
Ones	Tenths	Hundredths	Thousandths	Ten Thousandths

Round 2.416 to the nearest tenth.

$$2.416 \longrightarrow 2.4$$

Round 2.416 to the nearest hundredth.

$$2.416 \longrightarrow 2.42$$

Round each number to the indicated place value.

- 1 Round 12.3456 to the nearest tenth _____
- 2 Round 3.0345 to the nearest thousandth _____
- 3 Round 7.789 to the nearest hundredth _____
- 4 Round 2.15672 to the nearest ten-thousandth _____
- 5 Round 3.45499 to the nearest hundredth _____
- 6 Round 9.012 to the nearest tenth _____
- 7 Round 3.6743 to the nearest thousandth _____
- 8 Round 315.697243 to the nearest thousandth _____
- 9 Round 654.145419 to the nearest hundredth _____
- 10 Round 0.012 to the nearest tenth _____
- 11 Round 1.629543 to the nearest thousandth _____
- 12 Round 98.9542 to the nearest tenth _____
- 13 Round 6.00003 to the nearest ten-thousandth _____
- 14 Round 3.9999 to the nearest thousandth _____

Estimating Decimal Products and Quotients

NATURAL NUMBERS AND DECIMALS

$$\begin{array}{r} 3.292 \\ \times 4.708 \\ \hline \end{array}$$
 Estimate the answer. Round to the nearest whole number. $\times 5$

Round each decimal to the nearest whole number. Write the estimated product or quotient. Do the work in your head, not on paper.

1 1.2×3.15

2 7.8×50.2

3 5.4×8.2

4 9.5×7.11

5 89.7×9.6

6 1.5×8.24

7 7×40.2

8 8×79.6

9 54.5×4.86

10 $34.32 \div 7.4$

11 $23.6 \div 6.3$

12 $55.8 \div 8.24$

13 $299.7 \div 2.34$

14 $100.46 \div 24.8$

15 $74.86 \div 2.91$

16 $399.5 \div 39.7$

17 $71.86 \div 7.8$

18 $36.4 \div 11.9$

19 $11.672 \div 4.4$

20 $559.9 \div 56.2$

21 $42.2 \div 14.399$

Dividing Decimals

NATURAL NUMBERS AND DECIMALS

$$40 \div 0.02 = 0.02 \overline{)40.00} = 2 \overline{)4000} \begin{array}{r} 2000 \\ 4000 \\ \hline 0 \end{array}$$

Solve.

1 $4.6 \div 2.3 =$

2 $7.5 \div 0.25 =$

3 $110 \div 1.1 =$

4 $60 \div 0.12 =$

5 $810 \div 0.09 =$

6 $310.5 \div 4.5 =$

7 $5 \div 2.5 =$

8 $40.32 \div 1.6 =$

9 $128.57544 \div 2.367 =$

10 $100 \div 0.001 =$

11 $150 \div 0.25 =$

12 $56.2 \div 0.02 =$

13 $66.0543 \div 0.001 =$

14 $10000 \div 0.05 =$

15 $82.02 \div 0.02 =$

16 $30 \div 0.006 =$

17 $0.8 \div 0.025 =$

18 $25 \div 5.5 =$

19 $0.6 \div 0.001 =$

20 $56.97 \div 3.6 =$