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# 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  $1.2 \times 3.15$

2  $7.8 \times 50.2$

3  $5.4 \times 8.2$

4  $9.5 \times 7.11$

5  $89.7 \times 9.6$

6  $1.5 \times 8.24$

7  $7 \times 40.2$

8  $8 \times 79.6$

9  $54.5 \times 4.86$

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

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

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  $56.97 \div 3.6 =$