Decimals: Exercise Supplement*

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Abstract

This module is from Fundamentals of Mathematics by Denny Burzynski and Wade Ellis, Jr. This module is an exercise supplement for the chapter "Decimals" and contains many exercise problems. Odd problems are accompanied by solutions.

1 Exercise Supplement

1.1 Reading and Writing Decimals (here[1])

Exercise 1 *(Solution on p. 6.)*
The decimal digit that appears two places to the right of the decimal point is in the _____ position.

Exercise 2
The decimal digit that appears four places to the right of the decimal point is in the _____ position.

For problems 3-8, read each decimal by writing it in words.

Exercise 3 *(Solution on p. 6.)*
7.2

Exercise 4
8.105

Exercise 5 *(Solution on p. 6.)*
16.52

Exercise 6
5.9271

Exercise 7 *(Solution on p. 6.)*
0.005

Exercise 8
4.01701

For problems 9-13, write each decimal using digits.

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[1]"Decimals: Reading and Writing Decimals" <http://cnx.org/content/m34957/latest/>

Exercise 9 *(Solution on p. 6.)*
Nine and twelve-hundredths.

Exercise 10
Two and one hundred seventy-seven thousandths.

Exercise 11 *(Solution on p. 6.)*
Fifty-six and thirty-five ten-thousandths.

Exercise 12
Four tenths.

Exercise 13 *(Solution on p. 6.)*
Four thousand eighty-one millionths.

1.2 Converting a Decimal to a Fraction (here[2])

For problem 14-20, convert each decimal to a proper fraction or a mixed number.

Exercise 14
1.07

Exercise 15 *(Solution on p. 6.)*
58.63

Exercise 16
0.05

Exercise 17 *(Solution on p. 6.)*
$0.14\frac{2}{3}$

Exercise 18
$1.09\frac{1}{8}$

Exercise 19 *(Solution on p. 6.)*
$4.01\frac{1}{27}$

Exercise 20
$9.11\frac{1}{9}$

1.3 Rounding Decimals (here[3])

For problems 21-25, round each decimal to the specified position.

Exercise 21 *(Solution on p. 6.)*
4.087 to the nearest hundredth.

Exercise 22
4.087 to the nearest tenth.

Exercise 23 *(Solution on p. 6.)*
16.5218 to the nearest one.

Exercise 24
817.42 to the nearest ten.

Exercise 25 *(Solution on p. 6.)*
0.9811602 to the nearest one.

[2] "Decimals: Converting a Decimal to a Fraction" <http://cnx.org/content/m34958/latest/>
[3] "Decimals: Rounding Decimals" <http://cnx.org/content/m34959/latest/>

1.4 Addition, Subtraction, Multiplication and Division of Decimals, and Nonterminating Divisions (here[4], here[5], here[6], here[7])

For problem 26-45, perform each operation and simplify.

Exercise 26
$7.10 + 2.98$

Exercise 27 *(Solution on p. 6.)*
$14.007 - 5.061$

Exercise 28
$1.2 \cdot 8.6$

Exercise 29 *(Solution on p. 6.)*
$41.8 \cdot 0.19$

Exercise 30
$57.51 \div 2.7$

Exercise 31 *(Solution on p. 6.)*
$0.54003 \div 18.001$

Exercise 32
$32{,}051.3585 \div 23{,}006.9999$

Exercise 33 *(Solution on p. 6.)*
$100 \cdot 1{,}816.001$

Exercise 34
$1{,}000 \cdot 1{,}816.001$

Exercise 35 *(Solution on p. 6.)*
$10.000 \cdot 0.14$

Exercise 36
$0.135888 \div 16.986$

Exercise 37 *(Solution on p. 6.)*
$150.79 \div 100$

Exercise 38
$4.119 \div 10{,}000$

Exercise 39 *(Solution on p. 6.)*
$42.7 \div 18$

Exercise 40
$6.9 \div 12$

Exercise 41 *(Solution on p. 6.)*
$0.014 \div 47.6$. Round to three decimal places.

Exercise 42
$8.8 \div 19$. Round to one decimal place.

Exercise 43 *(Solution on p. 6.)*
$1.1 \div 9$

Exercise 44
$1.1 \div 9.9$

[4] "Decimals: Addition and Subtraction of Decimals" <http://cnx.org/content/m34960/latest/>
[5] "Decimals: Multiplication of Decimals" <http://cnx.org/content/m34963/latest/>
[6] "Decimals: Division of Decimals" <http://cnx.org/content/m34968/latest/>
[7] "Decimals: Nonterminating Divisions" <http://cnx.org/content/m34969/latest/>

Exercise 45 *(Solution on p. 6.)*

$30 \div 11.1$

1.5 Converting a Fraction to a Decimal (here[8])

For problems 46-55, convert each fraction to a decimal.

Exercise 46

$\frac{3}{8}$

Exercise 47 *(Solution on p. 6.)*

$\frac{43}{100}$

Exercise 48

$\frac{82}{1000}$

Exercise 49 *(Solution on p. 6.)*

$9\frac{4}{7}$

Exercise 50

$8\frac{5}{16}$

Exercise 51 *(Solution on p. 7.)*

$1.3\frac{1}{3}$

Exercise 52

$25.6\frac{2}{3}$

Exercise 53 *(Solution on p. 7.)*

$125.125\frac{1}{8}$

Exercise 54

$9.11\frac{1}{9}$

Exercise 55 *(Solution on p. 7.)*

$0.0\frac{5}{6}$

1.6 Combinations of Operations with Decimals and Fractions (here[9])

For problems 56-62, perform each operation.

Exercise 56

$\frac{5}{8} \cdot 0.25$

Exercise 57 *(Solution on p. 7.)*

$\frac{3}{16} \cdot 1.36$

Exercise 58

$\frac{3}{5} \cdot \left(\frac{1}{2} + 1.75\right)$

Exercise 59 *(Solution on p. 7.)*

$\frac{7}{2} \cdot \left(\frac{5}{4} + 0.30\right)$

Exercise 60

$19.375 \div \left(4.375 - 1\frac{1}{16}\right)$

Exercise 61 *(Solution on p. 7.)*

$\frac{15}{602} \cdot \left(2.\overline{6} + 3\frac{1}{4}\right)$

[8] "Decimals: Converting a Fraction to a Decimal" <http://cnx.org/content/m34970/latest/>

[9] "Decimals: Combinations of Operations with Decimals and Fractions" <http://cnx.org/content/m34971/latest/>

Exercise 62

$4\frac{13}{18} \div \left(5\frac{3}{14} + 3\frac{5}{21}\right)$

Solutions to Exercises in this Module

Solution to Exercise (p. 1)
hundredths
Solution to Exercise (p. 1)
seven and two tenths
Solution to Exercise (p. 1)
sixteen and fifty-two hundredths
Solution to Exercise (p. 1)
five thousandths
Solution to Exercise (p. 1)
9.12
Solution to Exercise (p. 2)
56.0035
Solution to Exercise (p. 2)
0.004081
Solution to Exercise (p. 2)
$85\frac{63}{100}$
Solution to Exercise (p. 2)
$\frac{11}{75}$
Solution to Exercise (p. 2)
$4\frac{7}{675}$
Solution to Exercise (p. 2)
4.09
Solution to Exercise (p. 2)
17
Solution to Exercise (p. 2)
1
Solution to Exercise (p. 3)
8.946
Solution to Exercise (p. 3)
7.942
Solution to Exercise (p. 3)
0.03
Solution to Exercise (p. 3)
181,600.1
Solution to Exercise (p. 3)
1.4
Solution to Exercise (p. 3)
1.5079
Solution to Exercise (p. 3)
$2.37\overline{2}$
Solution to Exercise (p. 3)
0.000
Solution to Exercise (p. 3)
$0.1\overline{2}$
Solution to Exercise (p. 4)
$2.\overline{702}$
Solution to Exercise (p. 4)
0.43

Solution to Exercise (p. 4)
$9.\overline{571428}$
Solution to Exercise (p. 4)
$1.\overline{3}$
Solution to Exercise (p. 4)
125.125125 (not repeating)
Solution to Exercise (p. 4)
$0.08\overline{3}$
Solution to Exercise (p. 4)
0.255
Solution to Exercise (p. 4)
5.425
Solution to Exercise (p. 4)
0.09343