Signed Numbers: Proficiency Exam*

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Abstract

This module is from Fundamentals of Mathematics by Denny Burzynski and Wade Ellis, Jr. This module is a proficiency exam to the chapter "Signed Numbers." Each problem is accompanied with a reference link pointing back to the module that discusses the type of problem demonstrated in the question. The problems in this exam are accompanied by solutions.

1 Proficiency Exam

Exercise 1 *(Solution on p. 3.)*

(here[1]) Write all integers that are strictly between –8 and –3.

Exercise 2 *(Solution on p. 3.)*

(here[2]) Write all integers that are between and including –2 and 1.

For problems 3-5, write the appropriate symbol (<, >, =) in place of the □ for each pair of numbers.

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

(here[3]) –1 □ –1

Exercise 4 *(Solution on p. 3.)*

(here[4]) 0 □ 3

Exercise 5 *(Solution on p. 3.)*

(here[5]) –1 □ –2

For problems 6 and 7, what numbers can replace x so that the statement is true?

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

(here[6]) $-3 \leq x < 0$, x is an integer.

Exercise 7 *(Solution on p. 3.)*

(here[7]) $-4 \leq x \leq 0$, x is a natural number.

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[1]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[2]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[3]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[4]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[5]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[6]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[7]"Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>

Exercise 8 *(Solution on p. 3.)*

(here[8]) How many units are there between –3 and 2?

For problems 9-20, find each value.

Exercise 9 *(Solution on p. 3.)*

(here[9]) $|-16|$

Exercise 10 *(Solution on p. 3.)*

(here[10]) $-|-2|$

Exercise 11 *(Solution on p. 3.)*

(here[11]) $-\left(-|-4|^2\right)$

Exercise 12 *(Solution on p. 3.)*

(here[12]) $|-5|+|-10|$

Exercise 13 *(Solution on p. 3.)*

(here[13]) $-8+6$

Exercise 14 *(Solution on p. 3.)*

(here[14]) $-3+(-8)$

Exercise 15 *(Solution on p. 3.)*

(here[15]) $0-16$

Exercise 16 *(Solution on p. 3.)*

(here[16]) $(-14)\cdot(-3)$

Exercise 17 *(Solution on p. 3.)*

(here[17]) $(-5-6)^2$

Exercise 18 *(Solution on p. 3.)*

(here[18]) $(-51)\div(-7)$

Exercise 19 *(Solution on p. 3.)*

(here[19]) $\frac{-42}{-7}$

Exercise 20 *(Solution on p. 3.)*

(here[20]) $\left|\frac{-32}{8}-\frac{-15-5}{5}\right|$

[8] "Signed Numbers: Variables, Constants, and Real Numbers" <http://cnx.org/content/m35027/latest/>
[9] "Signed Numbers: Absolute Value" <http://cnx.org/content/m35030/latest/>
[10] "Signed Numbers: Absolute Value" <http://cnx.org/content/m35030/latest/>
[11] "Signed Numbers: Absolute Value" <http://cnx.org/content/m35030/latest/>
[12] "Signed Numbers: Absolute Value" <http://cnx.org/content/m35030/latest/>
[13] "Signed Numbers: Addition of Signed Numbers" <http://cnx.org/content/m35031/latest/>
[14] "Signed Numbers: Addition of Signed Numbers" <http://cnx.org/content/m35031/latest/>
[15] "Signed Numbers: Subtraction of Signed Numbers" <http://cnx.org/content/m35032/latest/>
[16] "Signed Numbers: Multiplication and Division of Signed Numbers" <http://cnx.org/content/m35033/latest/>
[17] "Signed Numbers: Multiplication and Division of Signed Numbers" <http://cnx.org/content/m35033/latest/>
[18] "Signed Numbers: Multiplication and Division of Signed Numbers" <http://cnx.org/content/m35033/latest/>
[19] "Signed Numbers: Multiplication and Division of Signed Numbers" <http://cnx.org/content/m35033/latest/>
[20] "Signed Numbers: Multiplication and Division of Signed Numbers" <http://cnx.org/content/m35033/latest/>

Solutions to Exercises in this Module

Solution to Exercise (p. 1)
$\{-7, -6, -5, -4\}$
Solution to Exercise (p. 1)
$\{-2, -1, 0, 1\}$
Solution to Exercise (p. 1)
$=$
Solution to Exercise (p. 1)
$<$
Solution to Exercise (p. 1)
$>$
Solution to Exercise (p. 1)
$\{-3, -2, -1\}$
Solution to Exercise (p. 1)
$\{1, 2\}$
Solution to Exercise (p. 2)
5
Solution to Exercise (p. 2)
16
Solution to Exercise (p. 2)
-2
Solution to Exercise (p. 2)
16
Solution to Exercise (p. 2)
15
Solution to Exercise (p. 2)
-2
Solution to Exercise (p. 2)
-11
Solution to Exercise (p. 2)
-16
Solution to Exercise (p. 2)
42
Solution to Exercise (p. 2)
121
Solution to Exercise (p. 2)
$\frac{51}{7}$ or $7\frac{2}{7}$
Solution to Exercise (p. 2)
6
Solution to Exercise (p. 2)
0