

Grade 7 · Multiplying and Dividing Integers and Rational Numbers · Test

Common Core 7.NS.A.2a, 7.NS.A.2b, 7.NS.A.2c · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

This 45-minute test covers multiplying and dividing integers and rational numbers: sign rules, division by zero, products of fractions and decimals, and temperature problems (7.NS.A.2). It has nine questions worth 20 points. Show your work.

Test information

- **Grade:** Grade 7
- **Chapter:** Multiplying and Dividing Integers and Rational Numbers
- **Common Core:** 7.NS.A.2a, 7.NS.A.2b, 7.NS.A.2c
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 3 pts; Question 7: 3 pts; Question 8: 2 pts; Question 9: 2 pts)

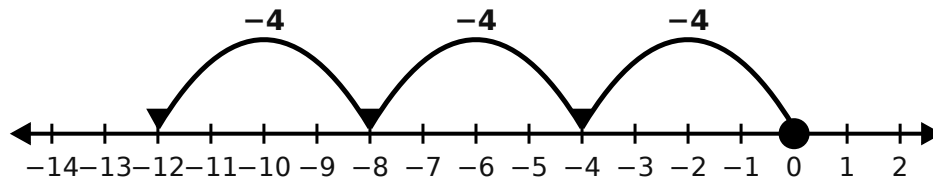
Question 1: Products (2 points)

Find each product.

- $(-9)(7)$ (1 point)
- $(-6)(-11)$ (1 point)

Question 2: Product from a Number Line (2 points)

The number line shows jumps that start at 0.



Three equal jumps from 0.

Write a multiplication equation for the jumps and state the product.

Question 3: Quotients (2 points)

Find each quotient.

- a. $-72 \div 8$ (1 point)
- b. $-56 \div (-7)$ (1 point)

Question 4: Zero in Division (2 points)

- a. Find $0 \div (-9)$. (1 point)
- b. Explain why $6 \div 0$ is undefined. (1 point)

Question 5: Decimals and Fractions (2 points)

Find each product.

- a. $(-0.5)(8.4)$ (1 point)
- b. $\left(-\frac{2}{3}\right)\left(-\frac{9}{10}\right)$ (1 point)

Question 6: A Pattern of Products (3 points)

The table multiplies -5 by several factors.

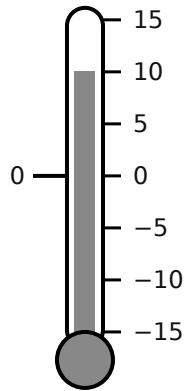
Factor	3	2	1	0	-1	-2
$(-5) \times \text{factor}$	-15	-10	-5	0	?	?

Products of -5 .

- a. Find the two missing products. (1 point)
- b. Describe how the products change as the factor decreases by 1. (1 point)
- c. What does the pattern suggest about the product of two negative numbers? (1 point)

Question 7: Falling Temperature (3 points)

The temperature is shown on the thermometer. It drops 4°F every hour for 6 hours.



10°F

Starting temperature.

- Find the total change in temperature. (1 point)
- Find the final temperature. (1 point)
- The total change of -24°F happened over 6 hours. Find the change per hour using division. (1 point)

Question 8: Equivalent Forms (2 points)

- Evaluate $-\frac{18}{6}$, $\frac{-18}{6}$, and $\frac{18}{-6}$. (1 point)
- Write $\frac{15}{-3}$ with the negative sign in the numerator and evaluate it. (1 point)

Question 9: Three Factors (2 points)

Evaluate $(-2)(-5)(-3) \div 6$.