

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

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

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

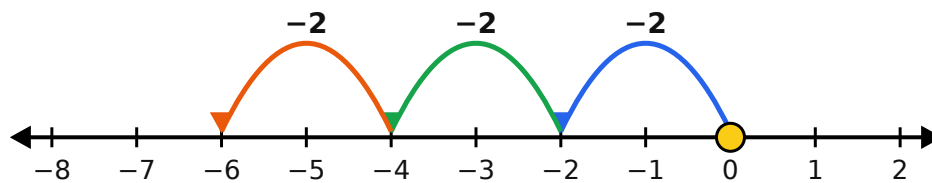
Check your skill with multiplying and dividing integers, decimals, and fractions. These ten multiple-choice questions cover sign rules, division by zero, equal parts, and temperature changes. Pick one answer for each, then read the explanation.

Grade 7 Common Core: 7.NS.A.2a · 7.NS.A.2b · 7.NS.A.2c

Questions

Question 1

What product does the number line show?



Three equal jumps from 0.

- A. $3(-2) = 6$
- B. $3 + (-2) = 1$
- C. $3(-2) = -6$
- D. $(-3)(-2) = 6$

Question 2

What is $(-8)(-5)$?

- A. -40
- B. 40
- C. -13
- D. 13

Question 3

What is $-54 \div 9$?

- A. -6
- B. 6
- C. -45
- D. -9

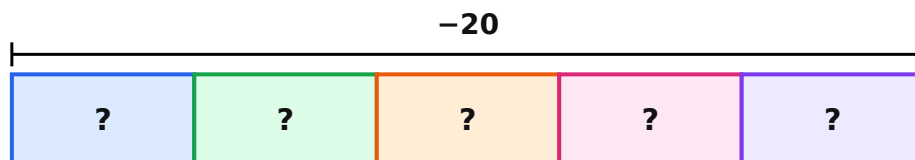
Question 4

Which expression is undefined?

- A. $\frac{0}{7}$
- B. $\frac{-7}{7}$
- C. $\frac{0}{-7}$
- D. $\frac{7}{0}$

Question 5

The tape diagram shows -20 split into 5 equal parts. What is the value of each part?



Five equal parts.

- A. 4
- B. -15
- C. -4
- D. -25

Question 6

Which expression has a different value from the other three?

- A. $-\frac{15}{3}$
- B. $\frac{-15}{3}$
- C. $\frac{15}{-3}$
- D. $\frac{-15}{-3}$

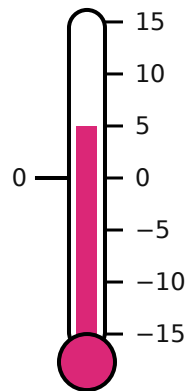
Question 7

What is $(-3)(-4)(-2)$?

- A. 24
- B. -9
- C. -14
- D. -24

Question 8

The temperature starts at the value shown and falls 3°F each hour for 4 hours. What is the final temperature?



5°F

Starting temperature.

- A. -12°F
- B. -7°F
- C. 7°F
- D. -17°F

Question 9

The table multiplies -3 by a list of factors. What is the missing product?

Factor	2	1	0	-1
$(-3) \times \text{factor}$	-6	-3	0	?

Products of -3 .

- A. -3

- B. 3
- C. -9
- D. 0

Question 10

What is $(-0.4)(-7)$?

- A. 2.8
- B. -2.8
- C. 28
- D. 0.28

Answer key

1. **C** - Three jumps of 2 units to the left land on -6 , so $3(-2) = -6$.
2. **B** - Both factors are negative, so the product is positive: $8 \cdot 5 = 40$. Choosing -40 forgets the sign rule.
3. **A** - The signs differ, so the quotient is negative, and $54 \div 9 = 6$. Check: $9 \cdot (-6) = -54$.
4. **D** - Division by zero has no answer. The fractions $\frac{0}{7}$ and $\frac{0}{-7}$ both equal 0, because the divisor is not zero.
5. **C** - $-20 \div 5 = -4$. Check: $5 \cdot (-4) = -20$. A positive 4 would give $+20$.
6. **D** - $\frac{-15}{-3} = 5$ because the signs match. The other three each equal -5 , since $-\frac{p}{q} = \frac{-p}{q} = \frac{p}{-q}$.
7. **D** - $(-3)(-4) = 12$, then $12 \cdot (-2) = -24$. Three negative factors make the product negative.
8. **B** - The total change is $4(-3) = -12$, so the final temperature is $5 - 12 = -7$. Forgetting the starting value gives -12 .
9. **B** - The products rise by 3 each time, so after 0 comes 3. This matches $(-3)(-1) = 3$.
10. **A** - $0.4 \cdot 7 = 2.8$, and the product is positive. Placing the decimal point wrongly gives 28 or 0.28.

Remember:

- Same signs give a positive result; different signs give a negative result.
- $(-1)(-1) = 1$ follows from the distributive property and $-1 + 1 = 0$.
- Division by 0 is undefined, but $0 \div q = 0$ when $q \neq 0$.
- $-\frac{p}{q} = \frac{-p}{q} = \frac{p}{-q}$ for $q \neq 0$.