

# Grade 7 - Adding and Subtracting Rational Numbers - Quiz

Common Core 7.NS.A.1 · maths-pdf.fr/en/

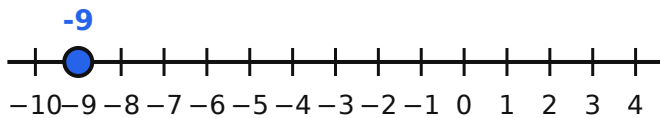
Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Answer all 10 multiple-choice questions on adding and subtracting integers, fractions, and decimals, including number line models, opposites, and absolute value as distance. Pick the single best answer, then read the explanation to see why it is right and which common mistake each wrong choice shows. A score of 8 or more means you are ready for the test.

**Grade 7** · Common Core State Standards: **7.NS.A.1**

## Questions

### Question 1



What is  $-9+4$ ?

- A. 5
- B.  $-13$
- C.  $-5$
- D. 13

### Question 2

What is  $-3-(-8)$ ?

- A.  $-11$
- B.  $-5$
- C. 11
- D. 5

### Question 3

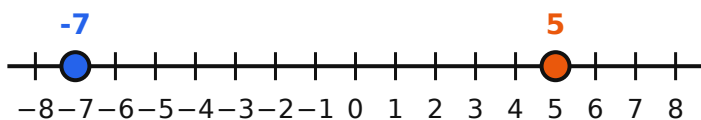
Which expression equals  $6-11$ ?

- A.  $6+(-11)$
- B.  $6+11$

C.  $-6+11$

D.  $11-6$

#### Question 4



What is the distance between  $-7$  and  $5$  on

a number line?

A. 12

B. 2

C. -12

D. 35

#### Question 5

What is  $-\frac{1}{2}+\frac{1}{4}$ ?

A.  $-\frac{3}{4}$

B.  $-\frac{1}{4}$

C.  $\frac{1}{4}$

D.  $-\frac{2}{6}$

#### Question 6

What is  $-2.5-3.75$ ?

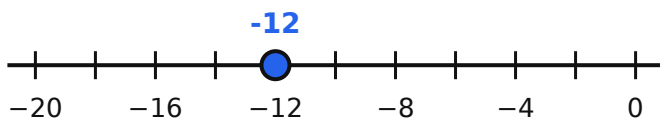
A. 1.25

B.  $-1.25$

C.  $-6.25$

D. 6.25

#### Question 7



A diver at  $-12$  feet rises 5 feet. Where is the

diver now?

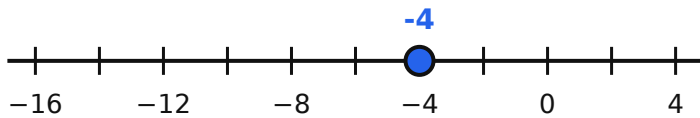
A.  $-7$  feet

B.  $-17$  feet

C. 7 feet

D. 17 feet

### Question 8



The temperature is  $-4$  degrees and drops

9 degrees. What is the new temperature?

- A. 5 degrees
- B.  $-13$  degrees
- C.  $-5$  degrees
- D. 13 degrees

### Question 9

What is the additive inverse of  $-3.4$ ?

- A.  $-3.4$
- B. 0
- C.  $\frac{1}{3} \cdot 4$
- D. 3.4

### Question 10

What is  $|-8| + |3|$ ?

- A. 5
- B. 11
- C.  $-11$
- D.  $-5$

## Answers

1. **C** - The signs differ, so subtract sizes:  $9 - 4 = 5$ , and the negative number is larger in size, so the answer is  $-5$ .
2. **D** -  $-3 - (-8) = -3 + 8 = 5$ . Subtracting a negative adds.
3. **A** - Subtracting 11 is the same as adding the opposite,  $-11$ .
4. **A** -  $|5 - (-7)| = 12$ . Distance is never negative.
5. **B** -  $-\frac{2}{4} + \frac{1}{4} = -\frac{1}{4}$ . Adding the denominators is a common mistake.
6. **C** - Both numbers are negative after rewriting:  $-2.5 + (-3.75) = -6.25$ .
7. **A** - Rising adds:  $-12 + 5 = -7$ .
8. **B** - A drop means subtract:  $-4 - 9 = -13$ .
9. **D** - The additive inverse is the opposite, and  $-3.4 + 3.4 = 0$ .
10. **B** - Absolute values are distances from 0, so  $8 + 3 = 11$ .

## Remember

- Opposites add to 0:  $p + (-p) = 0$ .
- Same signs: add sizes and keep the sign. Different signs: subtract sizes and keep the sign of the larger size.
- Subtracting  $q$  means adding the opposite of  $q$ .
- $|p|$  is the distance from  $p$  to 0.
- The distance between  $p$  and  $q$  on a number line is  $|p - q|$ .