

Grade 7 - Multiplying and Dividing Rational Numbers - Answer Key

Common Core 7.NS.A.2 · maths-pdf.fr/en/

Use this answer key to check your work on the multiplying rational numbers worksheet. Every solution shows the steps, and the final answer appears in bold. If your answer is different, compare each step and look for the first place where the work changes.

Grade 7 · Common Core State Standards: **7.NS.A.2**

Exercise 1 - Positive times negative

Absolute values: $4 \times 7 = 28$

The signs are different, so the result is negative.

-28

Exercise 2 - Two negatives

Absolute values: $6 \times 5 = 30$

The signs are the same, so the result is positive.

30

Exercise 3 - Divide negative by positive

Absolute values: $48 \div 6 = 8$

The signs are different, so the result is negative.

-8

Exercise 4 - Divide two negatives

Absolute values: $54 \div 9 = 6$

The signs are the same, so the result is positive.

6

Exercise 5 - Decimal product

$2.5 \times 4 = 10$. The signs differ, so the product is negative.

-10

Exercise 6 - Product of decimals

$6 \times 3 = 18$, and there are 2 decimal places, so 0.18. Two negatives give a positive.

0.18

Factor 1	Factor 2	Sign
-0.6	-0.3	positive

Same signs: positive.

Exercise 7 - Divide decimals

$3.6 \div 0.9 = 4$. The signs differ, so the quotient is negative.

-4

Exercise 8 - Multiply fractions

Multiply the numerators and the denominators: $-\frac{2}{3} \times \frac{3}{4} = -\frac{1}{2}$

$-\frac{1}{2}$

Exercise 9 - Negative fractions

Multiply the numerators and the denominators: $-\frac{5}{6} \times (-\frac{9}{10}) = \frac{3}{4}$

$\frac{3}{4}$

Exercise 10 - Divide fractions

Use the reciprocal: $-\frac{3}{4} \times 2 = -1\frac{1}{2}$

$$-1\frac{1}{2}$$

Exercise 11 - Divide by a negative fraction

Use the reciprocal: $-\frac{2}{5} \times (-3\frac{3}{4}) = 1\frac{1}{2}$

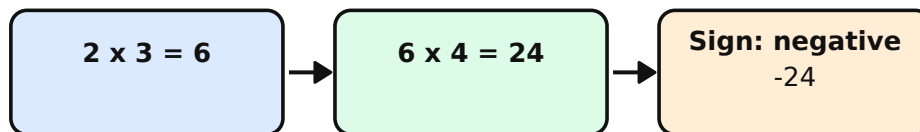
$$1\frac{1}{2}$$

Exercise 12 - Three factors

There are 3 negative factors, an odd number, so the product is negative.

$$2 \times 3 \times 4 = 24$$

$$\mathbf{-24}$$



Multiply the sizes, then attach the sign.

Exercise 13 - Fraction to decimal

$7 \div 8 = 0.875$. The division ends with a remainder of 0.

0.875, terminating

Step	Work
7 / 8	70 / 8 = 8 r 6
60 / 8	7 r 4
40 / 8	5 r 0
Decimal	0.875

Long division steps.

Exercise 14 - Repeating decimal

Divide 5 by 11: 0.4545... The digits 45 repeat forever.

$0.\overline{45}$

Fraction	Decimal
5/11	0.454545...
Short form	0.45 repeating

The block 45 repeats.

Exercise 15 - Mixed number product

Change to fractions: $-\frac{10}{3} \times \frac{3}{2} = -\frac{30}{6} = -5$.

-5

Exercise 16 - Falling temperature

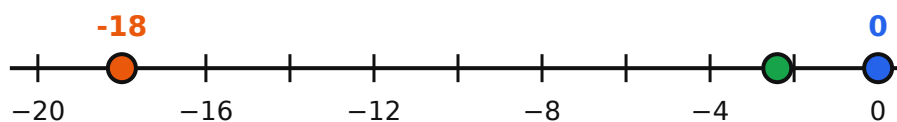
$-3.5 \times 6 = -21$

-21°F

Exercise 17 - Submarine descent

$-2.4 \times 7.5 = -18$

-18 feet



7.5 minutes at 2.4 feet per minute gives 18 feet down.

Exercise 18 - Weekly withdrawals

$-12.75 \times 8 = -102$

-\$102

Exercise 19 - Share the debt

$$-96 \div 4 = -24$$

-\$24

Exercise 20 - Average change

$$\text{Sum: } -1.5 + 2.25 - 3.75 + 0.5 = -2.5.$$

$$-2.5 \div 4 = -0.625$$

-\$0.625 per day

Day	Change
1	-1.50
2	+2.25
3	-3.75
4	+0.50
Mean	-0.625

Daily changes.

Exercise 21 - Hiking down

$$-\frac{3}{4} \times \frac{5}{2} = -\frac{15}{8} = -1\frac{7}{8}$$

$-1\frac{7}{8}$ feet