

Grade 7 - Solving Real-World Problems with Rational Numbers - Worksheet

Common Core 7.NS.A.3 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

These 20 problems practice real-world problems with the four operations on integers, fractions, and decimals, including temperature, elevation, money, and complex fractions (Common Core 7.NS.A.3). They start with the basic skill, move to different kinds of numbers and multistep work, and end with six word problems set in everyday situations such as shopping, sports, and travel.

Show every step of your work, and use the answer key only after you have tried each problem.

Grade 7 · Common Core State Standards: **7.NS.A.3**

Exercise 1 - Temperature change



A cold front.

The temperature was 12.5°F at 3 p.m. and -3.5°F at midnight. Find the change in temperature.

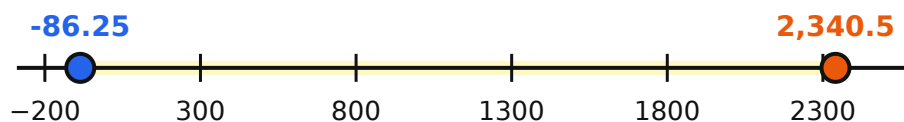
Exercise 2 - Account activity

Step	Amount
Start	-\$14.50
Deposit	+\$60.00
Payment	-\$22.75

Account activity.

Noah's account balance is $-\$14.50$. He deposits $\$60$ and then pays $\$22.75$. Find the balance.

Exercise 3 - Elevation gap



Canyon floor and peak.

A mountain peak is 2,340.5 feet above sea level. A canyon floor is 86.25 feet below sea level. Find the vertical distance from the canyon floor to the peak.

Exercise 4 - Servings

Ethan has $2\frac{1}{2}$ cups of rice. Each serving uses $\frac{3}{4}$ cup. How many full servings can he make?

Exercise 5 - Golf scores

In four rounds, Diego scores -3 , $+2$, -1 , and $+4$ compared with par. Find his total score compared with par.

Exercise 6 - Complex fraction

Simplify the complex fraction $\frac{\frac{3}{4}}{\frac{2}{5}}$.

Exercise 7 - Mean temperature

The low temperatures on four days were -4 , -7.5 , 2 , and 1.5 degrees. Find the mean low.

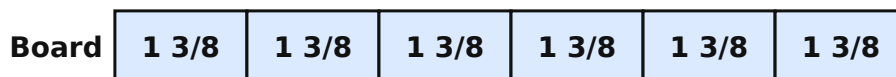
Exercise 8 - Stock loss

Priya's savings of $\$350$ lost $\frac{2}{5}$ of their value in a bad week. Write the change as a signed number.

Exercise 9 - Divide a debt

Three friends share a bill of $\$75$, which is recorded as -75 . Find each person's share.

Exercise 10 - Cutting boards



Pieces of equal length.

A board is $8\frac{1}{4}$ feet long. Mei cuts it into pieces that are each $1\frac{3}{8}$ feet. How many pieces does she get?

Exercise 11 - Ship and plane

A submarine is at -45.6 meters and a helicopter hovers at 120.4 meters. Find the distance between them.

Exercise 12 - Mixed forms

Evaluate $-\frac{3}{4} \times 8 + 2.5$.

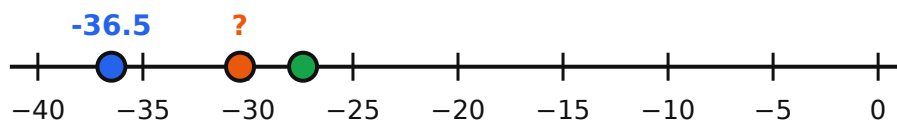
Exercise 13 - Grouping

Evaluate $(-2.4 + 5.1) \times (-10)$.

Exercise 14 - Phone plan

Sofia's phone account balance is $-\$8.40$. The plan charges $\$19.99$ a month for 3 months, and she adds a credit of $\$25$. Find the final balance.

Exercise 15 - Dive and rise



A diver's depth.

A diver is at -36.5 feet. She rises one-fourth of that depth, and then sinks 3 feet. Find her final depth.

Exercise 16 - Snack stand

The Little League snack stand had net daily results of $+\$45.50$, $-\$12.25$, $-\$30.80$, and $+\$18.40$. Find the total and the mean per day, rounded to the nearest cent.

Exercise 17 - Earn it back

Aisha owes her brother $\$37.50$, recorded as $-\$37.50$. She earns $\$12.50$ an hour for 4.5 hours. Find her balance after paying nothing out of the pay.

Exercise 18 - Water tank



Morning use.

A 20-gallon water tank loses $\frac{3}{8}$ of its water in the morning. In the evening it loses $\frac{1}{4}$ of the water that was left. How much water remains?

Exercise 19 - Falling temperature

The temperature is 5°F and falls $2\frac{1}{4}$ degrees each hour for $3\frac{1}{2}$ hours. Find the final temperature.

Exercise 20 - Fabric cost

Fabric at the craft store costs \$9 for $\frac{3}{4}$ yard. Find the cost per yard, and then the cost of $2\frac{1}{3}$ yards.