

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

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

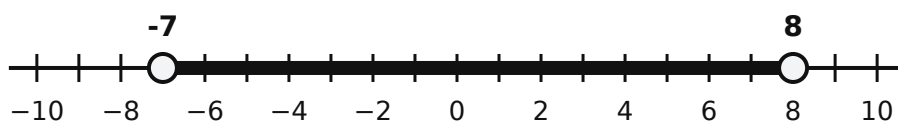
Name: _____ Class: _____ Date: ____/____/____

This 45-minute test checks 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). It has 9 questions worth 20 points in all. Show your work, because most questions give partial credit for correct steps.

About this test

- Grade: Grade 7
- Chapter: Solving Real-World Problems with Rational Numbers
- Standards: 7.NS.A.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Temperature change [2 pts]



Temperatures in degrees F.

The temperature was -7°F at 6 a.m. and 8°F at 3 p.m. Find the change in temperature.

Question 2 - Checking account [2 pts]

Jamal's balance is $-\$23.40$. He deposits $\$50$ and then spends $\$19.85$. Find the new balance.

Question 3 - Complex fraction [2 pts]

Simplify $\frac{\frac{7}{2}}{\frac{21}{8}}$.

Question 4 - Descent [2 pts]

A hot air balloon descends 4.5 feet per second for 6 seconds. Write its change in height as a signed number, and find the final height if it starts at 80 feet.

Question 5 - Mixed fractions [2 pts]

Evaluate $-\frac{5}{6} + \frac{2}{3} - \frac{1}{4}$.

Question 6 - Bake sale [2 pts]

Day	Profit
Fri	+\$32.50
Sat	-\$8.75
Sun	+\$15.25
Mon	-\$4.00

A bake sale's daily profit.

Find the total profit and the mean daily profit for the four days.

Question 7 - Distance apart [2 pts]

A scuba diver is at -18.5 meters and a seagull is at 27.25 meters. Find the distance between them.

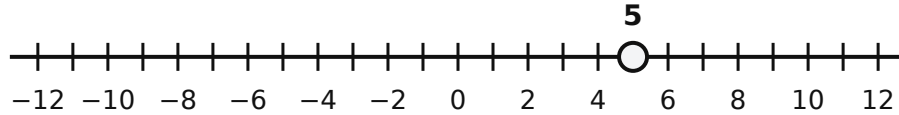
Question 8 - Pool [3 pts]

Pool	2/5 filled	rest
Volume	30,000 gal	

A pool holds 30,000 gallons.

- Find how many gallons are in the pool when it is $\frac{2}{5}$ full. (1 point)
- The pool is then drained by $\frac{1}{6}$ of its full capacity (30,000 gallons). Find the number of gallons left. (1 point)
- Write the change in water for the draining as a signed number. (1 point)

Question 9 - Weather [3 pts]



Start temperature 5 degrees F.

The temperature is 5°F . It falls 3.25 degrees each hour for 2 hours. Then it rises $3\frac{1}{2}$ degrees.

(a) Find the temperature after 2 hours. (b) Find the final temperature. (c) Find the total change from the start.