

7.NS.3 — Rational Numbers in the Real World

Word Problems • Grade 7 • CCSS 7.NS.3

Name: _____

Date: _____

Read each problem carefully, show your work, and write your answer with its unit.

1. The temperature in Anchorage was -14.5°F in the morning. By noon it had risen 8.75°F , and by evening it dropped 12.25°F . What was the temperature in the evening?

2. Maria owes her friend \$23.50. She earns \$15.75 babysitting and uses all of it to pay back part of her debt. How much does she still owe?

3. A submarine was at -240 feet. It rose $\frac{3}{4}$ of that distance toward the surface. What is the submarine's new depth?

4. Jake's bank account balance was $-\$45.20$. He deposited \$120.00 and then spent \$67.89 on groceries. What is his new balance?

5. A recipe calls for $2\frac{1}{4}$ cups of flour per batch. If Sofia wants to make $3\frac{1}{2}$ batches, how many cups of flour does she need?

6. The temperature changed by -3.6°F each hour for 5.5 hours. What was the total change in temperature?

7. A football team gained $6\frac{1}{2}$ yards on the first play, lost $3\frac{3}{4}$ yards on the second play, and gained $2\frac{1}{4}$ yards on the third play. What was the total yardage change after three plays?

8. Carlos drove from his home to the city, which is 84.6 miles away. He drove $\frac{1}{3}$ of the distance before stopping for gas. How many miles does he still need to drive?
9. A scientist recorded the following temperature readings (in $^{\circ}\text{C}$) over four days: -6.2, 4.8, -3.5, and 1.1. What was the average daily temperature?
10. Lena had \$52.40 in her account. She made three equal withdrawals of \$18.75 each. What is her account balance after the withdrawals?
11. A deep-sea fish swam from -320 feet to -185 feet. How many feet did the fish rise?
12. A store marked down all prices by $\frac{1}{5}$. If a jacket originally cost \$87.50, how much does the jacket cost after the markdown?
13. Ethan hiked up a mountain gaining 2,150 feet in elevation over 6.5 hours. What was his average elevation gain per hour? Round to the nearest hundredth.
14. The water level in a reservoir dropped 0.75 feet per day for 8 days and then rose 1.25 feet per day for 3 days. What was the total change in water level?
15. Priya scored $-3\frac{1}{2}$ points on a penalty in a trivia game, then earned $7\frac{3}{4}$ points on the next question, and lost $2\frac{1}{4}$ points on a penalty. What is her total score for those three rounds?
16. A scuba diver descended at a rate of -4.5 meters per minute. After 6.4 minutes, how deep is the diver?

17. Alex borrowed \$120 from his parents. He paid back $\frac{3}{8}$ of the debt in the first month and $\frac{1}{4}$ of the debt in the second month. How much does he still owe?

18. A stock lost \$2.35 per share on Monday, gained \$1.80 per share on Tuesday, and lost \$0.95 per share on Wednesday. If Mia owns 40 shares, what is the total change in the value of her investment?

19. A chef has $15\frac{3}{4}$ pounds of ground beef. He uses $2\frac{1}{8}$ pounds for each meatloaf. How many complete meatloaves can he make, and how much beef is left over?

20. On a winter night, the temperature was -8.4°F . The next morning it was -22.9°F . How many degrees did the temperature drop overnight?

21. A city's budget had a surplus of \$4,500,000. The city spent \$6,750,000 on road repairs and received a state grant of \$1,250,000. What is the new budget balance?

22. Rosa swam $\frac{3}{4}$ of a mile each session for 5 sessions, and then $1\frac{1}{2}$ miles each session for 3 sessions. How many total miles did she swim?

Answer Key

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|----------------------------|----------------------------|---|
| 1. -18°F | 9. -0.95°C | 17. \$45 |
| 2. $-\$7.75$ | 10. $-\$3.85$ | 18. $-\$60$ |
| 3. -60 feet | 11. 135 feet | 19. 7 meatloaves with $\frac{7}{8}$ pound left over |
| 4. \$6.91 | 12. \$70 | 20. 14.5°F |
| 5. $7\frac{7}{8}$ cups | 13. 330.77 feet per hour | 21. $-\$1,000,000$ |
| 6. -19.8°F | 14. -2.25 feet | 22. $8\frac{1}{4}$ miles |
| 7. 5 yards | 15. 2 points | |
| 8. 56.4 miles | 16. -28.8 meters | |