ALBERT

Name _____ Date _____

Rational Number Word Problems Worksheet

Grade 7 · Common Core 7.NS.A.3

> Solve real-world and mathematical problems involving the four operations with rational numbers.

Practice

Builds the skill step by step.

1. The temperature was $-4°F$ at 6 a.m. and rose 11 degrees by noon. What was the noon temperature?

2. A diver at -18 feet swims down another 7 feet. What is her new depth?

3. Jo had \$35 and spent \$42.50 using an overdraft. What is her balance?

4. A submarine descends 25 meters per minute for 4 minutes. What is its change in depth?

   A. 100 m

   B. -29 m

   C. -6.25 m

   D. -100 m

5. A $\frac{3}{4}$-pound bag of nuts is shared equally by 3 friends. How much does each get?

6. A stock lost \$2.40 each day for 5 days. What was the total change?

7. A football team lost 6 yards, then gained 15 yards. What was the net gain?

8. A recipe needs $\frac{2}{3}$ cup of milk per batch. How much milk for 4 batches?

   A. $\frac{8}{12}$ cup

   B. $4\frac{2}{3}$ cups

   C. $2\frac{2}{3}$ cups

   D. 6 cups

9. The high was 8°C and the low was −5°C. What was the difference?

10. A ribbon is 4.5 m long. It is cut into pieces 0.75 m long. How many pieces?

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On Level

Grade-level practice.

1. An elevator starts at floor 12, goes down 15 floors to the garage, then up 6 floors. Floor 0 is the street. What floor is it on?

2. A hiker starts at 230 feet below sea level and climbs 15.5 feet per minute for 20 minutes. What is her elevation?

3. Maya earns \$12.50 per hour and works $3\frac{1}{2}$ hours. She spends \$18.75 on lunch. How much does she have left from her pay?

4. The temperature drops 1.5°F each hour from 4°F. What is the temperature after 6 hours?

   A. 5°F

   B. −9°F

   C. 13°F

   D. −5°F

5. A tank holds 24 gallons. It leaks $\frac{3}{8}$ gallon per hour. How many gallons are left after 16 hours?

6. A company had profits of $-\$1{,}250$, $\$3{,}400$ and $-\$875$ in three months. What was the total?

7. Leo walks $\frac{2}{3}$ mile to school and $\frac{5}{6}$ mile home by a different route. How far does he walk in all?

8. Which expression gives the average of the temperatures $-3°$, $5°$ and $-8°$?

   A. $-3 + 5 - 8 \times 3$

   B. $(-3 + 5 + (-8)) \div 3$

   C. $(3 + 5 + 8) \div 3$

   D. $-3 \times 5 \times (-8) \div 3$

9. Find the average of $-3°$, $5°$ and $-8°$.

10. A board 7.2 feet long has 1.8 feet cut off each end. How long is the remaining board?

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Challenge

Multi-step and word problems that stretch it.

1. A water level is 2.4 m below normal. It rises 0.35 m per day. How many days until it is 0.4 m above normal?

2. A store buys 40 shirts for $8.75 each and sells them for $14.50 each. It also pays $65 in shipping. What is its profit?

3. A recipe makes 6 servings with $2\frac{1}{4}$ cups of flour. How much flour is needed for 8 servings?

4. On Monday, a stock opened at $45.20 and changed by −$1.35, +$0.80 and −$2.10 during the day. What was the closing price?

   A. $47.85

   B. $44.65

   C. $49.45

   D. $42.55

5. A climber is at 1,250 feet. She descends $\frac{3}{5}$ of the way down to a camp at 0 feet, then climbs back up 120 feet. What is her elevation?

6. The average of four temperatures is $-2.5°F$. Three of them are $4°F$, $-6°F$ and $-3°F$. What is the fourth?

7. A phone battery drops 0.8% per minute while streaming. It starts at 64%. After how many minutes will it reach 20%?

8. Sam says a temperature change from $-7°$ to $-2°$ is -5 degrees. What mistake did he make, and what is the correct change?

9. A gardener has 15 m of fencing. She uses $\frac{2}{5}$ of it for one bed and 4.25 m for another. How much is left?

10. A tank fills at $\frac{3}{4}$ gallon per minute and drains at $\frac{1}{3}$ gallon per minute at the same time. How many minutes to gain 10 gallons?