Rational Numbers on the Number Line

Rational numbers on number lines: Models and calculations

Name _____ **Date** _____ **Score** _____ / 6

QUICK REVIEW

Count the equal intervals from one labeled whole number to the next. If there are four, each small step is $\frac{1}{4}$. Start at zero: move left for a negative number and right for a positive number.

Worked example

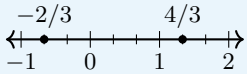
Plot $-\frac{2}{3}$ and $\frac{4}{3}$.

1. The small steps are $\frac{1}{3}$ of a unit each. Begin at the labeled 0.

2. $-\frac{2}{3}$: $\frac{2}{3} \div \frac{1}{3} = 2$, so move 2 small ticks left.

3. $\frac{4}{3}$: $\frac{4}{3} \div \frac{1}{3} = 4$, so move 4 small ticks right.

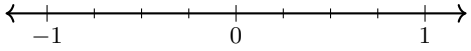
Answer: Left to right: $-\frac{2}{3}$, $\frac{4}{3}$.



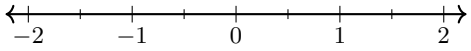
Practice Problems

Show your thinking.

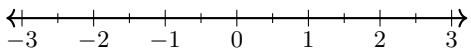
1. Plot $-\frac{3}{4}$ and $\frac{1}{4}$.



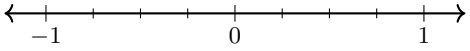
2. Plot -1.5 and 0.5 using half-unit ticks.



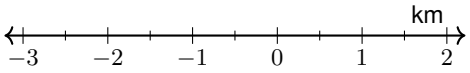
3. Plot $-\frac{5}{2}$ and $\frac{3}{2}$.



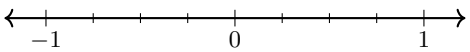
4. Order and plot $\frac{3}{4}, 0, -\frac{1}{2}$.



5. A trail marker is at -2 km and another at 0.5 km. Mark both.



6. Place a point one quarter left of zero and another three quarters right.



Answer Key

1. Left to right: $-\frac{3}{4}$, $\frac{1}{4}$.
2. Left to right: $-\frac{3}{2}$, $\frac{1}{2}$.
3. Left to right: $-\frac{5}{2}$, $\frac{3}{2}$.
4. Left to right: $-\frac{1}{2}$, 0, $\frac{3}{4}$.
5. Left to right: -2 km, 0.5 km.
6. Left to right: $-\frac{1}{4}$, $\frac{3}{4}$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. The small steps are $\frac{1}{4}$ of a unit each. Begin at the labeled 0.
2. $-\frac{3}{4}$: $\frac{3}{4} \div \frac{1}{4} = 3$, so move 3 small ticks left.
3. $\frac{1}{4}$: $\frac{1}{4} \div \frac{1}{4} = 1$, so move 1 small ticks right.

Problem 2

1. The small steps are $\frac{1}{2}$ of a unit each. Begin at the labeled 0.
2. $-\frac{3}{2}$: $\frac{3}{2} \div \frac{1}{2} = 3$, so move 3 small ticks left.
3. $\frac{1}{2}$: $\frac{1}{2} \div \frac{1}{2} = 1$, so move 1 small ticks right.

Problem 3

1. The small steps are $\frac{1}{2}$ of a unit each. Begin at the labeled 0.
2. $-\frac{5}{2}$: $\frac{5}{2} \div \frac{1}{2} = 5$, so move 5 small ticks left.
3. $\frac{3}{2}$: $\frac{3}{2} \div \frac{1}{2} = 3$, so move 3 small ticks right.

Problem 4

1. The small steps are $\frac{1}{4}$ of a unit each. Begin at the labeled 0.
2. $-\frac{1}{2}$: $\frac{1}{2} \div \frac{1}{4} = 2$, so move 2 small ticks left.
3. Plot 0 on the labeled zero tick without moving.
4. $\frac{3}{4}$: $\frac{3}{4} \div \frac{1}{4} = 3$, so move 3 small ticks right.

Problem 5

1. The small steps are $\frac{1}{2}$ of a kilometer each. Begin at the labeled 0.
2. -2 km: $2 \div \frac{1}{2} = 4$, so move 4 small ticks left.
3. 0.5 km: $\frac{1}{2} \div \frac{1}{2} = 1$, so move 1 small ticks right.

Problem 6

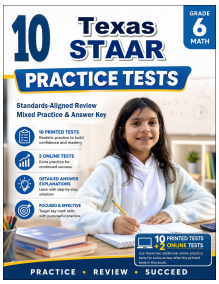
1. The small steps are $\frac{1}{4}$ of a unit each. Begin at the labeled 0.
2. $-\frac{1}{4}$: $\frac{1}{4} \div \frac{1}{4} = 1$, so move 1 small ticks left.
3. $\frac{3}{4}$: $\frac{3}{4} \div \frac{1}{4} = 3$, so move 3 small ticks right.

TESTINAR

Keep Building Grade 6 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 6 books



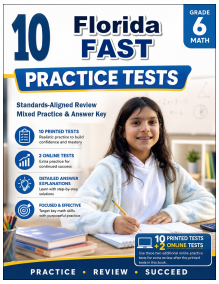
TEXAS STAAR

10 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



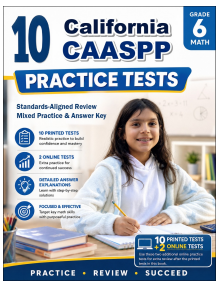
FLORIDA FAST

10 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



CALIFORNIA CAASPP

10 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 6 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/6