Graphing Ratios

Graphing ratios: Mistakes and missing information

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

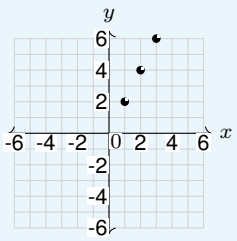
QUICK REVIEW

Put the first quantity on the horizontal axis and the second on the vertical axis. If $y = 2x$, the ratio pairs $(0, 0), (1, 2), (2, 4)$ lie on a straight line through the origin. Plot x first, then y.

Worked example

For $y = 2x$, list the pairs for $x = 1, 2, 3$ and plot them.

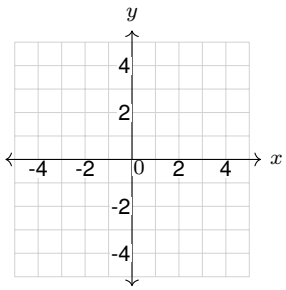
1. Use $y = 2x$: $y = 2 \times 1 = 2$ for $x = 1$.
2. For the other inputs, $y = 2 \times 2 = 4$; $y = 2 \times 3 = 6$.
Include $(0, 0)$ because both quantities start at zero.
Answer: $(1, 2), (2, 4), (3, 6)$.



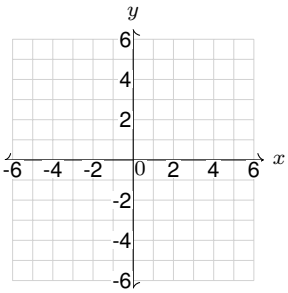
Practice Problems

Show your thinking.

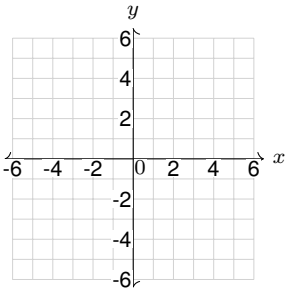
1. The ratio is $y = 2x$. A student plots $(4, 2)$ for $x = 2$. Correct the point and the coordinate order.



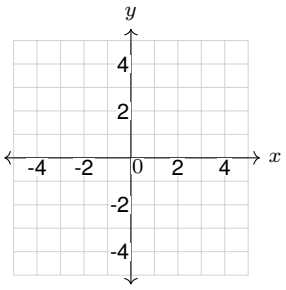
2. The point $(2, 6)$ lies on a ratio graph. Recover the rate, then plot $x = 0, 1, 2$.



3. A table lists $(0, 0), (2, 4), (3, 5)$. Repair the last point for the same ratio and plot all three.

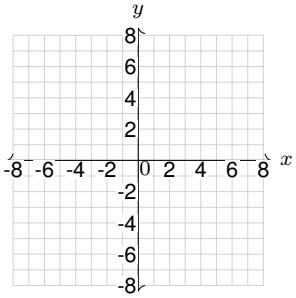


4. A ratio graph contains $(4, 4)$. Plot its points with $x = 1, 3, 5$.



5. Is $(0, 3)$ on the ratio graph $y = 3x$? Show the calculation, then give the correct point for $x = 0$.

6. The vertical value is twice the horizontal value. Build and graph three pairs for $x = 0, 1, 4$.



Answer Key

1. $(2, 4)$.
2. $(0, 0), (1, 3), (2, 6)$.
3. $(0, 0), (2, 4), (3, 6)$.
4. $(1, 1), (3, 3), (5, 5)$.
5. No; $(0, 0)$.
6. $(0, 0), (1, 2), (4, 8)$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. $y = 2 \times 2 = 4$.
2. The ordered pair is $(x, y) = (2, 4)$; $(4, 2)$ would fail because $2 \neq 2 \times 4 = 8$.

Problem 2

1. Use $y = 3x$: $y = 3 \times 0 = 0$ for $x = 0$.
2. For the other inputs, $y = 3 \times 1 = 3$; $y = 3 \times 2 = 6$. Include $(0, 0)$ because both quantities start at zero.

Problem 3

1. Use $y = 2x$: $y = 2 \times 0 = 0$ for $x = 0$.
2. For the other inputs, $y = 2 \times 2 = 4$; $y = 2 \times 3 = 6$. Include $(0, 0)$ because both quantities start at zero.

Problem 4

1. Use $y = 1x$: $y = 1 \times 1 = 1$ for $x = 1$.
2. For the other inputs, $y = 1 \times 3 = 3$; $y = 1 \times 5 = 5$. Include $(0, 0)$ because both quantities start at zero.

Problem 5

1. At $x = 0$, $3 \times 0 = 0$, not 3.
2. The difference $3 - 0 = 3$ shows $(0, 3)$ cannot be on this ratio graph.

Problem 6

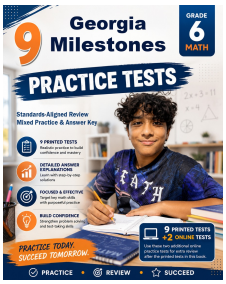
1. Use $y = 2x$: $y = 2 \times 0 = 0$ for $x = 0$.
2. For the other inputs, $y = 2 \times 1 = 2$; $y = 2 \times 4 = 8$. Include $(0, 0)$ because both quantities start at zero.

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



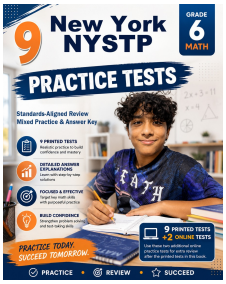
GEORGIA MILESTONES

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



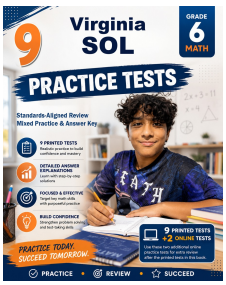
NEW YORK NYSTP

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



VIRGINIA SOL

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 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