



Systems of two equations

GRADE 8 MATH

Name _____

Date _____

Give every solution as a pair (x, y) . Check in both equations.

WORKED EXAMPLE

The solution is where the lines meet: both coordinates. Variables cancel and constants disagree $\rightarrow$ parallel, no solution. Constants agree $\rightarrow$ same line, infinitely many.

1. Solve $x + y = 7$ and $x - y = 3$.

APPLICATION

Show your thinking

Answer

2. Solve $y = 2x$ and $x + y = 9$.

APPLICATION

Show your thinking

Answer

3. Check whether $(2, 5)$ solves $y = 2x + 1$ and $x + y = 7$.

APPLICATION

Show your thinking

Answer

4. Explain why checking a point in only one equation is not enough.

REASONING

Show your thinking

Answer

5. How many solutions do $y = 4x + 3$ and $y = 4x - 1$ have? Explain.

REASONING

Show your thinking

Answer

6. How many solutions do $y = x + 2$ and $3y = 3x + 6$ have? Explain.

REASONING

Show your thinking

Answer

7. Two numbers add to 20 and differ by 6. Find them.

APPLICATION

Show your thinking

Answer

8. Solve $3x + 2y = 16$ and $x = 4$.

APPLICATION

Show your thinking

Answer

9. Sketch $y = x + 1$ and $y = -x + 5$ and read off where they cross. Then check it algebraically.

Show your thinking

Answer