

Name _____

Date _____

Linear Systems: your summary

1 Fill in every blank from memory. No notes.

2 Check it against the Unit Summary in a different colour.

3 Tick ✓ or X on each card. Every X is a topic to review.

vertexmath.ca
Worksheet, answers &
this cheat sheet



Which method?

Write the tool for each case.

$y = 4x - 7$

$5x + 2y = 9,$
 $3x - 2y = 7$

$y = 2x + 1, y =$
 $2x - 5$

1 Solution of a system ☒ ☐

1 Is $(7, -2)$ a solution of $x + 3y = 1$ and $2x + y = 12$? Show the test.

2 Where do $y = 2x - 1$ and $y = -x + 8$ cross?

2 Substitution ☒ ☐

3 Solve $x = 3y - 4$ and $2x + 5y = 25$.

4 In $4x - y = 9$ and $3x + 2y = 26$, which variable do you isolate, and why?

3 Elimination ☒ ☐

5 Solve $5x + 3y = 29$ and $2x - 3y = -1$.

6 To solve $2x + 3y = 17$ and $5x - 2y = 14$, what do you multiply each equation by? Solve.

4 Number of solutions ☒ ☐

7 Different slopes; same slope, different b ; same slope, same b : how many solutions each?

8 How many solutions: $y = -3x + 7$ and $6x + 2y = 14$?

5 Equivalent systems ☒ ☐

9 Are $x + 2y = 8$, $3x - y = 3$ and $2x + 4y = 16$, $4x + y = 11$ equivalent? Explain.

6 Setting up a problem ☒ ☐

10 Two numbers add to 57. One is 9 less than twice the other. Write the system and solve it.

7 Distance and mixture ☒ ☐

11 How many litres of 10% and of 40% solution make 30 L at 20%?

12 A plane flies 1200 km with the wind in 2 h and back in 2.5 h. Find its speed in still air and the wind speed.

My traps Your three most likely mistakes, and how you will catch each one.

1 _____ **2** _____ **3** _____

1 Yes: $7 - 6 = 1$ and $14 - 2 = 12$
2 (3, 5)
3 (5, 3)
4 y : its coefficient is -1 , so $y = 4x - 9$
5 Add: $7x = 28$, so (4, 3)
6 First by 2, second by 3: $19x = 76$, so (4, 3)
7 one; none; infinitely many
8 Infinitely many: both are $y = -3x + 7$
9 Yes: both have solution (2, 3)
10 $x + y = 57$, $y = 2x - 22$ and 35
11 $x + y = 30$, $0.1x + 0.4y = 6$: 20 L and 10 L
12 $d + w = 600$, $d - w = 480$: 540 km/h, wind 60 km/h

Answers • Answers to the numbered prompts. Cover this strip until you are done.