Systems of Equations

Grade 8–10 Math · Grades 8–10 · About 30 minutes · 8 questions

Name _____ Date _____ Score / 8

WHAT YOU WILL PRACTICE

- Solve systems of equations by elimination
- Solve systems of equations by substitution
- Form and solve systems of equations from a context

WORKED EXAMPLE

Solve $2x + y = 9$ and $x - y = 3$.

1. The y terms have opposite signs, so add the equations: $3x = 12$.
2. Divide by 3: $x = 4$.
3. Substitute into the first equation: $2 \times 4 + y = 9$, so $y = 1$.
4. Check in the second equation: $4 - 1 = 3$.

Answer: $x = 4$, $y = 1$

Questions

Show your work in the space under each question.

1. Solve $x + y = 10$ and $x - y = 4$

2. Solve $2x + y = 11$ and $x + y = 7$

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

© YFCampus · www.yfcampus.com · Free to print for home and classroom use. Not for resale.

4. Solve $2x + 3y = 13$ and $2x - y = 1$

5. Solve $3x + y = 14$ and $2x + 3y = 14$

6. Solve $5x - 2y = 11$ and $3x + 4y = 17$

7. Solve $y = 2x + 1$ and $3x + y = 16$

8. Two coffees and three teas cost ₱990. Four coffees and one tea cost ₱1,130. Find the cost of one coffee and the cost of one tea.

© YFCampus · www.yfcampus.com · Free to print for home and classroom use. Not for resale.

Answers: Systems of Equations

Mark your own work, then go back to any question you got wrong before reading the tutor tip.

Q	QUESTION	ANSWER
1	Solve x + y = 10 and x − y = 4	**x = 7, y = 3**
2	Solve 2x + y = 11 and x + y = 7	**x = 4, y = 3**
3	Solve 3x + 2y = 16 and x + 2y = 8	**x = 4, y = 2**
4	Solve 2x + 3y = 13 and 2x − y = 1	**x = 2, y = 3**
5	Solve 3x + y = 14 and 2x + 3y = 14	**x = 4, y = 2**
6	Solve 5x − 2y = 11 and 3x + 4y = 17	**x = 3, y = 2**
7	Solve y = 2x + 1 and 3x + y = 16	**x = 3, y = 7**
8	Two coffees and three teas cost ₱990. Four coffees and one tea cost ₱1,130. Find the cost of one coffee and the cost of one tea.	**Coffee ₱240, tea ₱170**

TUTOR TIP

Same signs subtract, different signs add. Then always check your pair of values in the equation you did not use for substitution.

Stuck on a question? Work through it live with a tutor.

YFCampus offers one-to-one online Math tutoring matched to your school curriculum. Book a free trial class at **www.yfcampus.com/ph**

Written for students aged 13 to 16 and suitable for Grades 8–10. Check your school's curriculum for the exact order of topics. YFCampus is independent and is not affiliated with any exam board or education ministry.