

SYSTEM OF EQUATIONS

MISS NASSIF

GRAPHING METHOD

Find the point of intersection for each system of equations using the graphing method.

1. $Y = 3x - 5$

$Y = 6x - 17$

2. $Y = x - 3$

$Y = 2x - 8$

3. $Y = 4x + 14$

$Y = 10 + 2x$

4. $Y = 3x$

$Y = 7x - 6$

COMPARISON METHOD

Find the point of intersection for each system of equations using the comparison method.

5. $Y = 3x - 5$

$Y = 6x - 17$

6. $Y = x - 3$

$Y = 2x - 8$

7. $Y = 4x + 14$

$Y = 10 + 2x$

8. $Y = 3x$

$Y = 7x - 6$

9. $X = y - 2$

$X = 2y - 12$

10. $2x = y - 8$

$2x = -2y + 34$

WORD PROBLEMS

For each problem, identify the variables, make a system of equations and solve the system by comparison.

11. Motorcycle Company A charges a one-time membership fee of 210\$ and 20\$ every time you ride. Motorcycle Company B charges 35\$ every time you ride, but only charges 105\$ for their membership. How many times would you have to ride at each for the total cost to be the same?

12. Grace and Jane each go out babysitting on Friday night. Grace gets paid 9\$ per hour and receives a tip of 15\$ at the end of the night. Jane gets paid 10\$ per hour and receives a tip of 9\$. If they each made the same amount, then how many hours did they work and how much money did they earn?
13. Carole receives a weekly base salary of 120\$ plus a 10\$ commission for every item sold. Her friend Jessica receives a weekly base salary of 150\$ and an 8\$ commission for every item sold. How many items must they each sell to earn the same weekly salary?
14. The Kandev car rental company charges a basic fee of 15\$ plus 10 cents per km. The Rak car rental company charges a basic fee of 25\$ plus 5 cents per km. What distance must be traveled for the two companies to charge the same amount?
15. A school principal has the choice of two transportation companies to organize a field trip for the students. The first company charges a base amount of 120\$ plus 1.50\$ per student. The second company charges a base amount of 80\$ plus 2\$ per student. How many students must come for the transportation costs to be the same for both companies?