

LESSON 46 ANSWERS

1. B 2. D 3. D 4. C 5. D 6. A
 7. C 8. B 9. C 10. B 11. B 12. B
 13. A 14. B 15. D 16. A 17. C

Worked-out solutions to selected problems:

2. Add x to both sides: $3x - 5 = 4$
 Add 5 to both sides: $3x = 9$
 Divide both sides by 3: $x = 3$
 Find the answer: $x + 3 = 3 + 3 = 6$
3. Solve eq1 for y : $y = -2x + 2$
 Plug eq1 into eq2: $x + 3(-2x + 2) = -9$
 Solve eq2 for x : $x - 6x + 6 = -9$
 $-5x + 6 = -9$
 $-5x = -15$
 $x = 3$
 Use eq1 to find y : $y = -2(3) + 2 = -4$
 Find the answer: $(3, -4)$
4. Simplify each side $14 - 2x > 3x - 6$
 Subtract $3x$ from both sides: $14 - 5x > -6$
 Subtract 14 from both sides: $-5x > -20$
 Divide both sides by -5 and flip the inequality sign. $x < 4$
5. Simplify each side: $7 + 3x = 3x + 3c - 5$
 Solve for x : $7 + 0x = 3c - 5$
 $0x = 3c - 12$
 The equation has infinitely many solutions when $3c - 12 = 0$, so $c = 4$.
6. Write two equations: $3 - 2x = 7$ or $3 - 2x = -7$
 Solve both equations: $-2x = 4$ or $-2x = -10$
 Find the solutions: $x = -2$ or $x = 5$
 Find the answer: $-2 + 5 = 3$
7. Solve eq1 for x : $x = y + 5$
 Plug eq1 into eq2: $(y + 5) + 2y = -1$
 Solve eq2 for y : $3y + 5 = -1$
 $3y = -6$
 $y = -2$
 Use eq1 to find x : $x = (-2) + 5 = 3$
 Find the solution: $(3, -2)$
 Find the answer: $p = 3$

9. 2 quarts = 4 pints = 8 cups, so Josh needs 6 more cups.
10. $45 \times (2/5) = 18$, so there are 18 males and 27 females.
13. 1 km = 1000 m and 350 m = 0.35 km
14. x = Kate's age now;
 $x - 2$ = Kate's age two years ago
 $18 - 2 = 2(x - 2)$
 $x = 10$
 Kate is 10 years old.
 Mark is $18 - 10 = 8$ years older than Kate.
17. The solution set to $x - y > 1$ is R and S.
 The solution set to $2x + y \leq 2$ is Q and R.
 The solution set to the system is R.