

LESSON 47 ANSWERS

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

Worked-out solutions to selected problems:

2. Find the value of x : $0.4x = 16$
 $x = 40$
 Find the value of y : $\frac{2}{3}y = 12$
 $y = 18$
 Find the answer: $x - 2y = 40 - 36 = 4$
3. Multiply both sides by 12: $6x + 3 = 4$
 Solve for x : $6x = 1$
 $x = \frac{1}{6}$
4. $|x - 7| = -1 < 0$, so there is no solution.
5. Plug eq1 into eq2: $3x - (-2x + 8) = 7$
 Solve eq2 for x : $5x - 8 = 7$
 $5x = 15$
 $x = 3$
 Use eq1 to find y : $y = -2(3) + 8 = 2$
 Find the answer: $(3, 2)$
8. Use the slope formula: $m = \frac{k - 4}{3 - (-1)} = -3$
 Solve for k : $k - 4 = -12$
 $k = -8$
10. Write the equation: $20 \times 3 + 0.1x = 105$
 Solve for x : $0.1x = 45$
 $x = 450$
11. 40×60 minutes = 2400 words/hour
 $2400/200 = 12$ pages/hour
12. t = time it will take bus 2 to overtake bus 1
 $t + 1$ = time bus 1 will travel until bus 2 overtakes it
 Bus 2's distance in t hours = Bus 1's distance in $(1 + t)$ hours, so $70t = 60(1 + t)$.
 Solve for t , and you get $t = 6$.
 Bus 2 leaves the station at 2 PM and it will take 6 hours to overtake bus 1, so the answer is 8 PM.
15. 1 liter = 1,000 milliliters and 0.2 liters = 200 milliliters
 $200/60 = 3.3333\dots$, so she can fill up 3 bottles.

17. x = number of 4-seat tables
 y = number of 6-seat tables
 $4x$ = number of seats from 4-seat tables
 $6y$ = number of seats from 6-seat tables
 Total number of tables = 15, so $x + y = 15$.
 Total number of seats = 70, so $4x + 6y = 70$.
 Solve the system, and you get $x = 10$ and $y = 5$.
 There are 10 4-seat tables and 5 6-seat tables.