

LESSON 136 ANSWERS

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

Worked-out solutions to selected problems:

1. Solve eq1 for m : $3m = 4$
 $m = \frac{4}{3}$
 Solve eq2 for n : $n + 4 = 3n - 6$
 $-2n = -10$
 $n = 5$
 Find the answer: $3 \cdot \frac{4}{3} + 2 \cdot 5 = 14$
2. $(2^5)^2 \cdot (2^2)^{-3} = 2^{10} \cdot 2^{-6} = 2^4$
5. $\frac{3}{p} = \frac{1}{3}; p = 9$
6. Solve by factoring: $(x - 2)(x + 5) = 0$
 $x = 2, x = -5$
 Find the answer: $2 - 5 = -3$
7. Solve by completing the square:
 $x^2 - 2x = 1$
 $x^2 - 2x + 1 = 1 + 1$
 $(x - 1)^2 = 2$
 $x = 1 \pm \sqrt{2}$
8. $\frac{(x + 2)(x - 2)}{x + 2} \cdot \frac{x + 1}{x - 2} = x + 1$ for $x \neq 2, -2$
9. Excluded values: $x \neq 0, -5$
 LCD = $x(x + 5)$
 Multiply both sides by the LCD, then solve for x .
 $x^2 = 2(x + 5) - 5x$
 $x^2 + 3x - 10 = 0$
 $(x - 2)(x + 5) = 0$
 $x = 2, x = -5$
 $x \neq -5$, so $x = 2$
10. Plug $(0, -2)$ into $y = mx + b$, and you get $b = -2$.
 Plug $(2, 4)$ into $y = mx - 2$, and you get $m = 3$.
 So the linear function is $y = 3x - 2$.
11. Let's try the elimination strategy:
 The parabola is upward, so eliminate D.
 The parabola passes through $(0, 0)$, so eliminate A.
 The parabola passes through $(2, 0)$, so the answer is C.

12. Got $4/5$ correct = Missed $1/5$ = Missed 5 problems

Let x = number of problems in the test.

$$\frac{1}{5}x = 5; x = 25$$

13. Set up a proportion, then solve.

$$\frac{5}{75} = \frac{3}{x}; x = 45$$

14. x = width of the garden

$2x - 3$ = length of the garden

Area = 35, so $x(2x - 3) = 35$.

$$x(2x - 3) = 35$$

$$2x^2 - 3x - 35 = 0$$

$$(2x + 7)(x - 5) = 0$$

$$x = -\frac{7}{2}, x = 5$$

The garden is 5 ft by 7 ft, so the perimeter is 24 ft.

17. x = time together

$$\frac{1}{2} + \frac{1}{3} = \frac{1}{x}$$

Multiply both sides by LCD = $6x$.

$$3x + 2x = 6$$

$$5x = 6$$

$$x = \frac{6}{5} = 1.2$$

It will take 1.2 hours.