

PRACTICE QUIZ 2

1. Solve the equation for the unknown, $\frac{c}{-4} = -12$.

A. -16

B. -8

C. 3

D. 48

2. Solve the equation for the unknown, $a - 10 = -20$.

A. -30

B. -10

C. 2

D. 200

3. Solve the inequality for the unknown, $3(x + 1) + 2(x + 1) \geq 5(3 - x) + 4(x + 2)$.

A. $x \geq 0$

B. $x \geq 1$

C. $x \geq 2$

D. $x \geq 3$

4. The temperature on Monday was -7° F, and it increased 18° F by Tuesday afternoon. What is the temperature in $^\circ$ F on Tuesday afternoon?

A. -25

B. -11

C. 11

D. 25

5. A diver was at 125 feet below sea level. The diver dove down another 350 feet. Where was the diver located?
- A. 475 feet below sea level
- B. 225 feet below sea level
- C. 225 feet above sea level
- D. 475 feet above sea level
6. A pair of jeans with tax costs \$39.97, and a shirt with tax costs \$18.49. What is the amount of change for a pair of jeans and two shirts if playing with a \$100 bill?
- A. \$23.05
- B. \$36.98
- C. \$41.54
- D. \$60.03
7. Simplify $\left(\frac{x^5}{5}\right)^4$.
- A. $\frac{x^9}{20}$
- B. $\frac{x^{20}}{625}$
- C. $\frac{x^{20}}{20}$
- D. $\frac{x^9}{625}$
8. Solve $x^2 = 225$.
- A. -5, 5

B. $-10, 10$

C. $-15, 15$

D. $-20, 20$

9. The landmass of the United States is about 4×10^6 square miles, and the landmass of Alaska is about 7×10^5 square miles. How many times larger is the landmass of the United States than the landmass of Alaska?

A. 1

B. 3

C. 4

D. 6

PRACTICE QUIZ 2 – ANSWER KEY

1. D. The correct solution is 48 because both sides of the equation are multiplied by -4 . See Lesson: Equations with One Variable.

2. B. The correct solution is -10 because 10 is added to both sides of the equation. See Lesson: Equations with One Variable.

3. D. The correct solution is $x \geq 3$.

$$3x + 3 + 2x + 2 \geq 15 - 5x + 4x + 8 \quad \text{Apply the distributive property.}$$

$$5x + 5 \geq -x + 23 \quad \text{Combine like terms on both sides of the inequality.}$$

$$6x + 5 \geq 23 \quad \text{Add } x \text{ to both sides of the inequality.}$$

$$6x \geq 18 \quad \text{Subtract 5 from both sides of the inequality.}$$

$$x \geq 3 \quad \text{Divide both sides of the inequality by 6.}$$

See Lesson: Equations with One Variable.

4. C. The correct solution is 11 because $-7 + 18 = 11^\circ \text{ F}$. See Lesson: Solving Real-World Mathematical Problems.

5. A. The correct solution is 475 feet below sea level because $-125 - 350 = -475$ feet. See Lesson: Solving Real-World Mathematical Problems.

6. A. The correct solution is \$23.05 because the total cost is $18.49(2) + 39.97 = 36.98 + 39.97 = 76.95$. The amount of change is $100 - 76.95 = \$23.05$. See Lesson: Solving Real-World Mathematical Problems.

7. B. The correct solution is $\frac{x^{20}}{625}$ because $\left(\frac{x^5}{5}\right)^4 = \frac{x^{5 \times 4}}{5^4} = \frac{x^{20}}{625}$. See Lesson: Powers, Exponents, Roots, and Radicals.

8. C. The correct solution is $-15, 15$ because the square root of 225 is 15. The values of -15 and 15 make the equation true. See Lesson: Powers, Exponents, Roots, and Radicals.

9. D. The correct solution is 6 because the landmass of the United States is about 4,000,000 square miles and the landmass of Alaska is about 700,000 square miles. So, the United States is about 6 times larger. See Lesson: Powers, Exponents, Roots, and Radicals.

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