

Subskill # 43 Pre-Algebra/ Equations and Unknowns I

1. $[36 - (9 - 3)] - (5 - 2)^3 =$

- a. 3
- b. 6
- c. 21
- d. 18

2. $6x + x =$

- a. $6x^2$
- b. $6 + x$
- c. $7x$
- d. 6

3. $10^6 \div 10^4 =$

- a. 100
- b. 2
- c. 10
- d. 10^3

4. $\frac{6x^4 - 27x}{3x} =$

- a. $2x^3 - 9$
- b. $6x^4 - 9x$
- c. $2x^3 - 27$
- d. $6x^3 - 9$

5. $4^2 \times 10^2 =$

- a. 16
- b. 160
- c. 1,600
- d. 16,000

6. $-4(x + y) - xy =$

- a. xy
- b. $-4x - 4y - xy$
- c. $-4xy$
- d. None of the above

7. $10^8 \div 10^4 =$

- a. 1^4
- b. 10^2
- c. 10^{12}
- d. None of the above

8. Which of these equations represents that 7 more than 3 times a number is 28?

- a. $7 + (3 + n) = 28$
- b. $7n + 3 = 28$
- c. $3n + 7 = 28$
- d. $(7 + 3)n = 28$

9. Which of these equations is equal to $x = yz$?

- a. $z = yx$
- b. $y = xz$
- c. $y = z/x$
- d. $z = x/y$

10. A welder can weld 10 feet of pipe in 2 hours. Which of these number sentences shows how many feet he can weld in an 8-hour day?

- a. $5 + 8$
- b. $10/2 \times 8$
- c. 10×8
- d. $8 \div 5$

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11. Which of these statements is true about the number that goes in the box? $1000 \times \square = 7999$
- a. The number is less than 7
 - b. The number is equal to 7
 - c. The number is between 7 and 8
 - d. The number is greater than 8

12. What number goes in the box to make this statement true?
 $0.001 \times \square = 10$
- a. 100
 - b. 1,000
 - c. 10,000
 - d. 100,000

13. A businessman borrowed \$10,000 at 10% simple interest over 3 years. Which equation shows how much total interest he paid?
- a. $I = 10,000/3 \times 0.010$
 - b. $I = 10,000 \times 0.10 \times 3$
 - c. $I = 10,000 \times 10 \times 3$
 - d. $I = 10,000 + 0.10 \times 3$

14. A nurse takes pulse rates in 10-second increments. If he records 18 pulses in 10 seconds, what is the patient's pulse rate?
- a. 180
 - b. 108
 - c. 18
 - d. 60

15. Which of these equations completes the number line? 1, 3, 7, 15, ____, 63, 127
- a. $n + (2n)$
 - b. $n + n$
 - c. $n + (n + 1)$
 - d. $2n - 1$

The following table shows input numbers that have been changed by a rule to get output numbers. Use it for questions 16 and 17.

| | | | | | |
|----|----|----|-----|-----|-----|
| 10 | 30 | 60 | 100 | 160 | 200 |
| 6 | | 11 | | 21 | 25 |

16. What output number would represent the input number of 30?
- a. 7
 - b. 9
 - c. 8
 - d. 10
17. What output number would represent the input number of 100?
- a. 14
 - b. 15
 - c. 13
 - d. 1

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Answer Key

1. A

2. C

3. A

4. A

5. C

6. B

7. D

8. C

9. D

10. B

11. C

12. C

13. B

14. B

15. C

16. C

17. B

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