

Unit 1 - Tools of Algebra Test Review Guide

1. $x + 8 = 8 + x$ is an example of which property?
 - a) associative property of addition
 - b) additive identity
 - c) commutative property of addition
 - d) additive inverse

2. $2(x + 5) = 2x + 10$ is an example of which property?
 - a) associative property of multiplication
 - b) distributive property
 - c) commutative property of multiplication
 - d) multiplicative inverse property

3. $54321 \cdot 1 = 54321$ is an example of which property?
 - a) associative property of multiplication
 - b) distributive property
 - c) commutative property of multiplication
 - d) multiplicative identity property

4. $(150) + (50 + 25) = (150 + 50) + 25$ is an example of which property?
 - a) associative property of addition
 - b) distributive property
 - c) commutative property of multiplication
 - d) multiplicative inverse property

5. $-45 \left(-\frac{1}{45}\right) = 1$ is an examples of which property?
 - a) associative property of multiplication
 - b) distributive property
 - c) commutative property of multiplication
 - d) multiplicative inverse property

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6. Which of these values ($-2, -1, 0, 1, 2$) makes this equation true?

$$x^2 - 4 = 0$$

7. Which of these values ($-3, -1, 0, 1, 4$) makes this equation true?

$$x^2 - 12 = 0$$

Simplify the equations (Q8-Q10)

8. $\frac{2(7x-14)}{7} = 7$

9. $-(n - 5) + 3(n + 2) = 4(n - 3) - 1$

10. $15x + 55 = 12$

11. $(2x - 3y + 4z) + (9x - 8y + 7z)$

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12. The solution to the equation $3(x + 2) = 2(2x + 2)$ is

a. 4

c. 3

b. 2

d. 0

13. $2 - \frac{x}{4} = \frac{x}{4} + 1$

13. Mr. Alison has \$5 in his bank. How much money does he need to buy a pencil packet that costs \$78.

14. When you got your car fixed, the cost for parts was \$75. The cost for labor was \$45 per hour. If the total cost was \$255. Find the number of hours.

15. The length of a rectangle is twice its breadth. If the perimeter is 72 meter, find the length and breadth of the rectangle.

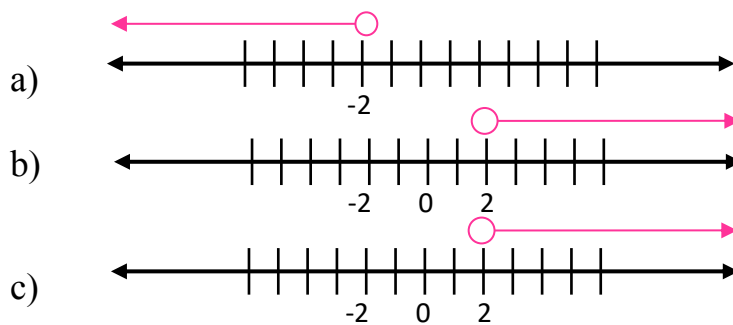
16. Robert's father is 4 times as old as Robert. After 5 years, father will be three times as old as Robert. Find their present ages.

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17. Five less than one-half a number is greater than 12.

18. The velocity of an object fired directly upward is given by $V = 80 - 32t$, where t is in seconds.

19. Which of the following is the graph of: $x < -2$



20. Solve $2 \times |3x - 1| = 16$

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21. **An algebraic expression containing two terms is called:**

- a) monomial
b) trinomial
c) binomial
d) None of these

22. **The subtraction of 10 times of x from y is**

- a) $5x - y$
b) $y - 10x$
c) $5x - y$
d) $5 + 10y$

23. $\left(\frac{a}{m}\right)^n = \dots\dots\dots$

- a) a^{mn}
b) $(a - m)^n$
c) $(am)^n$
d) $\frac{a^n}{m^n}$

24. **Solve** $\frac{3|x-3|}{2} \leq 5$

25. $\left|\frac{1}{2}x + 7\right| \geq 5$

26. **Let the 3 consecutive even numbers are x, x+2 and x+4.**

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27. A die is rolled find the probability that an even number is obtained.

28. $P(A) = \dots\dots\dots$

a. $\frac{\text{The number of ways event can occur}}{\text{the total number of possible outcomes}}$

b. $\frac{\text{The number of ways event can occur}}{\text{the total number of possible events}}$

c. $\frac{\text{The number of sample points}}{\text{the total number of possible outcomes}}$

d. $\frac{\text{The number of ways event repeated regularly}}{\text{the total number of possible outcomes}}$

29. If two events (A,B) are mutually exclusive, the probability of event A or event B occurring is given by _____.

a. $P(A \text{ or } B) = P(A) + P(B)$

c. $P(A \text{ or } B) = P(A) - P(B)$

b. $P(A \text{ or } B) = P(A+B)$

d. $P(A \text{ or } B) = P(B) + P(B)$

30. The two general types of random variables are _____ and _____.

a) Similar, continuous

c) Discrete, continuous

b) Discrete, uniform

d) Discrete, discontinuous

31. The probability of an event is always less than 1 / in the range from 0 to 1