Unit 1: Expressions

Name: _____   **Date:** _____

1. If x represents an even number, which expression represents an odd number?

   A. x^2 B. $x+3$ C. $3x$ D. $\dfrac{x}{3}$

2. Which expression represents the number of cents in d dimes and n nickels?

   A. $d+n$ B. $15(d+n)$

   C. $10d+5n$ D. $\dfrac{d}{10}+\dfrac{n}{5}$

3. Maria is twice as old as Sue. If x represents Sue's age, which expression represents how old Maria will be in three years?

   A. $2x$ B. $x+3$

   C. $\frac{1}{2}x-3$ D. $2x+3$

4. Using the letter n to represent a number, express "four less than twice this number" in terms of n.

5. The sum of two numbers is s. If one of the numbers is n, the second number can be expressed as

   A. $s+n$ B. $s\div n$ C. $s-n$ D. $n-s$

6. John's father weighs 20 pounds more than twice what John weighs. If John's weight is represented by y, then his father's weight may be represented by

   A. $2y$ B. $2y-20$

   C. $2y+20$ D. $\dfrac{y}{2}+20$

7. How many times larger than $\frac{1}{4}x$ is $5x$?

   A. 20   B. 9   C. $\frac{5}{4}$ D. $\frac{4}{5}$

8. Given the formula $P=K^2W$, find the value of P if $K=5$ and $W=-3$.

9. Find the value of (x^2-5x+4) if $x=7$.

10. When $x=2$ and $y=3$, which expression has the *smallest* value?

    A. $(x-y)$ B. $x\cdot y$

    C. $x+y$ D. $x\div y$

11. Find the value of $5x^2$ if $x=-3$.

12. Evaluate the expression $3x^2+y$ if $x=1$ and $y=-3$.

13. What is the value of R^2S if $R = 5$ and $S = -2$?

14. Find the value of $3a - 4b$ if $a = -2$ and $b = 1$.

15. Find the value of the expression $2xy^3$ if $x = 3$ and $y = -2$.

16. Find the value of the expression $2x^2y$ if $x = -1$ and $y = 3$.

17. If $x = 3$ and $y = -5$, find the value of $x - y^2$

18. If $a = \dfrac{b^2 - c}{2}$, find the value of a when $b = 2$ and $c = -4$.

19. Given the formula $t = rv^2$, find t if $r = 3$ and $v = -2$.

20. Find the sum of $5x^3 - 3x^2 + 5$ and $-2x^3 + 6x^2 - 5$.

21. Find the sum of $2x^2 - 5x - 2$ and $4x^2 - 6x + 8$.

22. Perform the indicated operation: $-5(4a - 6b)$

23. Express the sum of $3x^3 - 7x^2 + 2$ and $-x^3 + 9x^2 - 5$ as a trinomial.

24. Express in simplest form:
$(5a^2 - 3a + 8) + (-4a^2 - 1) + (15a + 11)$

25. The sum of $3x^2 + x - 7$ and $x^2 + 10$ can be expressed as

    A. $4x^4 + x - 3$ B. $3x^2 + x + 3$

    C. $3x^4 + x - 3$ D. $4x^2 + x + 3$

26. Find the sum of $7x^2 - 3x + 5$ and $8x + 2$.

27. Simplify by combining like terms:
$(5a + 3b) + 2(a - 3b)$

28. From $6x^2 - 3x + 9$ subtract $2x^2 - 5x + 8$.

29. Express the sum of $x^2 - 3x + 5$ and $3x^2 - 2x - 2$ as a trinomial.

30. From $7x^2 - 4x$ subtract $5x^2 + 2x$.

31. From $5x^2 + 3x - 6$ subtract $4x^2 - 5x + 6$

32. The expression $y^3 + y^3$ is equivalent to

    A. $2y^6$ B. $2y^3$ C. y^9 D. y^6

33. From $y^2 + 5y - 7$, subtract $y^2 - 3y - 4$.

34. Find the sum of $4a^2 - 7a - 5$ and $-8a^2 - 2a + 7$.

35. The sum of $4x^2 + x - 8$ and $x^2 + 9$ can be expressed as

    A. $4x^2 + x + 1$ B. $4x^4 + x + 1$

    C. $5x^2 + x + 1$ D. $5x^4 + x + 1$

36. From $9x^2 - 8x + 6$, subtract $7x^2 - 2x + 6$.

37. The expression $-6x - 7(4 + 3x)$ is equivalent to

    A. $3x - 28$ B. $-9x - 28$

    C. $-21x - 4$ D. $-27x - 28$

38. The expression $5(x - 3) - 4(x - 3)$ is equivalent to

    A. 1 B. $x - 3$ C. $x - 6$ D. $x - 27$

39. What is the sum of $5x - 6y + z$ and $5x - 6y - z$?

    A. $10x - 12y + 2z$ B. $10x - 12y$

    C. $10x + 12y - z$ D. $10x + 12y$

40. The sum of $8a + 3b - 4c$ and $4a - 3b + c$ is

    A. $12a + 6b - 3c$ B. $12a + 6b - 4c$

    C. $12a - 3c$ D. $12a^2 - 3c^2$

41. The sum of $3x^2 - 8x - 2$ and $4x - 2$ is

    A. $3x^2 - 4x - 4$ B. $3x^2 - 4x + 4$

    C. $3x^2 + 12x$ D. $7x^2 - 7x - 4$

42. The sum of $3x^2 + x + 8$ and $x^2 - 9$ can be expressed as

    A. $4x^2 + x - 1$ B. $4x^2 + x - 17$

    C. $4x^4 + x - 1$ D. $3x^4 + x - 1$

Unit 1: Expressions   01/22/2013

1.
Answer: B

2.
Answer: C

3.
Answer: D

4.
Answer: $2n - 4$

5.
Answer: C

6.
Answer: C

7.
Answer: A

8.
Answer: -75

9.
Answer: 18

10.
Answer: A

11.
Answer: 45

12.
Answer: 0

13.
Answer: -50

14.
Answer: -10

15.
Answer: -48

16.
Answer: 6

17.
Answer: -22

18.
Answer: 4

19.
Answer: 12

20.
Answer: $3x^3 + 3x^2$

21.
Answer: $6x^2 - 11x + 6$

22.
Answer: $-20a + 30b$

23.
Answer: $2x^3 + 2x^2 - 3$

24.
Answer: $a^2 + 12a + 18$

25.
Answer: D

26.
Answer: $7x^2 + 5x + 7$

27.
Answer: $7a - 3b$

28.
Answer: $4x^2 + 2x + 1$

29.
Answer: $4x^2 - 5x + 3$

30.
Answer: $2x^2 - 6x$

31.
Answer: $x^2 + 8x - 12$

32.
Answer: B

33.
Answer: $8y - 3$

34.
Answer: $-4a^2 - 9a + 2$

35.
Answer: C

36.
Answer: $2x^2 - 6x$

37.
Answer: D

38.
Answer: B

39.
Answer: B

40.
Answer: C

41.
Answer: A

42.
Answer: A