Grade 6 Practice 6.EE.A.2: Evaluating Expressions

NAME:_____

1.  Evaluate: $22 + k$ for $k = 25$

7.  Evaluate $\dfrac{np}{n+p}$ when $n = 9$ and $p = 15$.

2.  Complete the table for the given values of $x$.

| $x$ | $3x + 3$ |
|---|---|
| 0 | |
| 1 | |
| 2 | |
| 3 | |

8.  Evaluate: $\dfrac{2}{3}u - v$ for $u = 2.1$ and $v = 1.8$

    [A] 0.20    [B] −0.4    [C] 2.4    [D] −1.1

9.  Evaluate $\dfrac{ef}{e+f}$ for $e = 6$ and $f = 11$.

3.  Evaluate $2d + 5e$, where $d$ is 6 and $e$ is 6.9.

    [A] $\dfrac{66}{17}$    [B] $\dfrac{198}{17}$    [C] $\dfrac{66}{85}$    [D] $\dfrac{17}{66}$

4.  Use $a = -2$, $b = -3$, and $c = 6$ to write an expression that has a value of 12.

10.  Evaluate $\dfrac{y}{4x} - z$ for $x = 2$, $y = 24$, and $z = 1$.

    [A] 4    [B] 2    [C] −5    [D] −7

5.  Evaluate $-a - a - (b - b)$ for $a = -5$ and $b = -4$.

    [A] 0         [B] 10         [C] $-18$
    [D] 2         [E] $-2$

11.  Evaluate $2y^2(x + y)$ when $x = 1$ and $y = 5$.

    [A] 105    [B] 300    [C] 450    [D] 55

6.  Evaluate: $\dfrac{x}{y}$ for $x = -\dfrac{1}{7}$ and $y = -\dfrac{1}{11}$

12. Given $x = 4$ and $y = 2$, evaluate the expression $x^2 y^2$.

   [A] 12      [B] 64      [C] 32      [D] 16

13. Find the value of $2x^2 + x - 2$ when $x = -2$.

Evaluate:

14. $(5e + 5f)^2$ when $e = 5$ and $f = -2$.

15. $\dfrac{y}{2x} \cdot z^2$ when $x = 6$, $y = 168$, and $z = 12$.

   [A] 336              [B] 24,192
   [C] 1008             [D] 2016

16. Evaluate the expression $\dfrac{a^2 + b^2 - c^2}{2ab}$ when $a = 4$, $b = 3$, and $c = 5$.

17. Compare the quantities in Column A and Column B.

   | Column A | Column B |
   | --- | --- |
   | $6z - 5$ if $z = -2$ | $-6z - 5$ if $z = 2$ |

   [A] The quantity in Column A is greater.

   [B] The quantity in Column B is greater.

   [C] The quantities are equal.

   [D] The relationship cannot be determined from the information given.

18. Compare the quantities in Column A and Column B.

   | Column A | Column B |
   | --- | --- |
   | $c^{59}$ if $c = -50$ | $c^{58}$ if $c = -50$ |

   [A] The quantity in Column A is greater.

   [B] The quantity in Column B is greater.

   [C] The quantities are equal.

   [D] The relationship cannot be determined from the information given.

19. Use the problem solving strategy *Guess and Test* to find two values of $n$ that make the equation $4n = n^3$ true.

20. Complete: "To evaluate an expression with a variable, you... ."

[1] 47

| $x$ | $3x + 3$ |
|---|---|
| 0 | 3 |
| 1 | 6 |
| 2 | 9 |
| 3 | 12 |

[2]

[3] 46.5

[4] Answers may vary. Sample: $ab + c$

[5] B

[6] $\dfrac{11}{7}$

[7] $\dfrac{45}{8}$

[8] B

[9] A

[10] B

[11] B

[12] B

[13] 4

[14] 225

[15] D

[16] 0

[17] C

[18] B

[19] True for $n = -2, 0, 2$

[20] Replace the variable (unknown) with a number and find the value of the expression.