Name: _____ Period: _____ Date: _____

Order of Operations and Evaluating Expressions Assignment

Evaluate the expression for the given value of the variable.

1. $\frac{16}{n} + 2^3 - 10$ when $n = 8$

2. $r^5 - 12 \div r$ when $r = 3$

3. $b + 6 \div 4$ when $b = 1.5$

4. $3r^2 - 17$ when $r = 6$

5. $27 - \frac{24}{b}$ when $b = 8$

6. $\frac{9}{10} \cdot y - \frac{3}{10}$ when $y = \frac{1}{2}$

7. $2 \cdot x^3 + 4$ when $x = 3$

8. $8a$ when $a = 4$

9. $\frac{4}{3} \cdot x$ when $x = \frac{1}{6}$

10. $\frac{24}{x}$ when $x = 3$

11. $\frac{5}{16} - p$ when $p = \frac{3}{8}$

12. $(6w)^2$ when $w = 5$

13. $5s^2$ when $s = 16$

14. $4(t^3)$ when $t = 3$

15. $(7x)^3$ when $x = 2$

Name: _____ Period: _____ Date: _____

Order of Operations and Evaluating Expressions Assignment

Evaluate the expression for the given value of the variable.

16. $\frac{r^2 - 3}{4r}$ when $r = 3$

17. $\frac{6x - 3}{7 + (x^3 - 1)}$ when $x = 1$

18. $\frac{(9 - x)^2 + 4}{5}$ when $x = 3$

19. $\frac{y^5 - 12}{y(z^2 - 5)}$ when $y = 2$ and $z = 5$

20. $\frac{2(17 + 2x)}{y^2 - 11}$ when $x = 4$ and $y = 6$

Name: _____ Period: _____ Date: _____

Order of Operations and Evaluating Expressions Assignment

ANSWER

Evaluate the expression for the given value of the variable.

1. $\frac{16}{n} + 2^3 - 10$ when $n = 8$

$= \frac{16}{8} + 2^3 - 10$

$= 2 + 8 - 10$

$= 10 - 10$

$= 0$

2. $r^5 - 12 \div r$ when $r = 3$

$= 3^5 - 12 \div 3$

$= 243 - \frac{12}{3}$

$= 243 - 4$

$= 239$

3. $b + 6 \div 4$ when $b = 1.5$

$= 1.5 + 6 \div 4$

$= 1.5 + \frac{6}{4}$

$= 1.5 + 1.5$

$= 3$

4. $3r^2 - 17$ when $r = 6$

$= 3 \cdot 6^2 - 17$

$= 3 \cdot 36 - 17$

$= 108 - 17$

$= 91$

5. $27 - \frac{24}{b}$ when $b = 8$

$= 27 - \frac{24}{8}$

$= 27 - 3$

$= 24$

6. $\frac{9}{10} \cdot y - \frac{3}{10}$ when $y = \frac{1}{2}$

$= \frac{9}{10} \cdot \frac{1}{2} - \frac{3}{10}$

$= \frac{9}{20} - \frac{3}{10}$

$= \frac{9}{20} - \frac{6}{20}$

$= \frac{3}{20}$

7. $2 \cdot x^3 + 4$ when $x = 3$

$= 2 \cdot 3^3 + 4$

$= 2 \cdot 27 + 4$

$= 54 + 4$

$= 58$

8. $8a$ when $a = 4$

$= 8 \cdot 4$

$= 32$

Name: _____ Period: _____ Date: _____

Order of Operations and Evaluating Expressions Assignment

9. $\frac{4}{3} \cdot x$ when $x = \frac{1}{6}$

$= \frac{4}{3} \cdot \frac{1}{6}$

$= \frac{4}{18}$

$= \frac{2}{9}$

10. $\frac{24}{x}$ when $x = 3$

$= \frac{24}{3}$

$= 8$

11. $\frac{5}{16} - p$ when $p = \frac{3}{8}$

$= \frac{5}{16} - \frac{3}{8}$

$= \frac{5}{16} - \frac{6}{16}$

$= -\frac{1}{16}$

12. $(6w)^2$ when $w = 5$

$= (6 \cdot 5)^2$

$= 30^2$

$= 900$

13. $5s^2$ when $s = 16$

$= 5 \cdot 16^2$

$= 5 \cdot 256$

$= 1280$

14. $4(t^3)$ when $t = 3$

$= 4(3^3)$

$= 4(27)$

$= 108$

15. $(7x)^3$ when $x = 2$

$= (7 \cdot 2)^3$

$= 14^3$

$= 2744$

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Order of Operations and Evaluating Expressions Assignment

Evaluate the expression for the given value of the variable.

16. $\frac{r^2-3}{4r}$ when $r=3$

$=\frac{3^2-3}{4(3)}$

$=\frac{9-3}{12}$

$=\frac{6}{12}$

$=\frac{1}{2}$

17. $\frac{6x-3}{7+(x^3-1)}$ when $x=1$

$=\frac{6\cdot 1-3}{7+(1^3-1)}$

$=\frac{6-3}{7+(1-1)}$

$=\frac{3}{7}$

18. $\frac{(9-x)^2+4}{5}$ when $x=3$

$=\frac{(9-3)^2+4}{5}$

$=\frac{6^2+4}{5}$

$=\frac{36+4}{5}$

$=\frac{40}{5}$

$=8$

19. $\frac{y^5-12}{y(z^2-5)}$ when $y=2$ and $z=5$

$=\frac{2^5-12}{2(5^2-5)}$

$=\frac{32-12}{2(25-5)}$

$=\frac{20}{2(20)}$

$=\frac{1}{2}$

20. $\frac{2(17+2x)}{y^2-11}$ when $x=4$ and $y=6$

$=\frac{2\left(17+2(4)\right)}{6^2-11}$

$=\frac{2(17+8)}{36-11}$

$=\frac{3(25)}{25}$

$=3$