Homework # 58 - Test 7 Review

Factor each of the following polynomials completely.

1) $15k^3 - 18k$

2) $24x^2y^3z + 36x^4y^2z^3$

3) $t^3uv + 2tu^2$

4) $14ab - 98a\,b$

5) $49n^4p^2 + 21n^5p^3 + 84np^3$

6) $32fg^2h^3 + 128f^2g^3h^2 - 1024f^2g^4h^3$

Evaluate each expression fully. SHOW ALL STEPS AND FOLLOW *PEMDAS*. #8 is done as an example.

7) $(6-3)^2$

8) $5 + (16 + 2) \div 3$

$\quad$ **$5 + 18 \div 3$** $\quad$ *Parenthesis

$\quad\quad$ **$5 + 6$** $\quad\quad$ *Multiplication/Division

$\quad\quad\quad$ **11** $\quad\quad\quad$ from left to right

$\quad\quad\quad\quad\quad$ *Addition/Subtraction

$\quad\quad\quad\quad\quad\quad$ from left to right

9) $-4 - (1 - 5) - (-4)^2$

10) $-3 \times 2 \times 2(-3 - 1)$

11) $2 - 8 \div (-2) - 3 - (-12) \div (-6) \times (-2)$

12) $(-11 - 6 - (-5) + 1 + 3 \times 2) \div -5$

Evaluate each using the values given. SHOW ALL STEPS AND FOLLOW *PEMDAS*.

13) $y + z + 2$; use $y = -6$, and $z = 5$

14) $p(q \div 3 - p)$; use $p = -6$, and $q = -3$

15) $z \div 6 + x + x - 5$; use $x = 1$, and $z = 6$

16) $x(z + 3) + 1 + 3 - y$; use $x = 6$, $y = -5$, and $z = 2$

17) $6 + q + 5 - (q - p) + 15$; use $p = 1$, and $q = 1$

18) $-3 \div 3(a + c(b + 5) - (-6 + a))$; use $a = 1$, $b = -6$, and $c = -4$

Simplify each expression.

19) $9x + 9 - 1$

20) $10n - 4n$

21) $-9 - 6(-v + 5)$

22) $-10(-8x + 9) - 8x$

23) $1 + 4(2 - 3k)$

24) $-8v + 6(10 + 6v)$

25) $7(1 + 9v) - 8$

26) $-10 - 7(x + 2)$

27) $-2(-6x - 9) - 4(x + 9)$

28) $9(7k + 8) + 3(k - 10)$