Whittier Tech

Grade 12:
Economic Principles and Statistical Analysis Summer Project

Economic Principles and Statistical Analysis Name_____

Summer Packet

Date_____ Period____

Evaluate each expression.

1) $5 \times 2 \times 4$

2) $6 \div (2 \times 3)$

3) $5 \times 18 \div 6$

4) $\dfrac{10}{(-2)((-5)-(-10))}$

5) $7 - 10 - 3 + 9$

6) $6 + 5 - 3^3$

Simplify each expression.

7) $(3n + n^3) + (3n - 5n^3)$

8) $(1 + 4x^2) + (5x + 4x^2)$

9) $(2x^2 + 2) - (2x^2 + 1)$

10) $(11n^3 - 4n^2 + 4n^5) + (5n^5 + 11 + 7n^3)$

11) $(-11 + 11v^5 - 10v^4) - (-2 + 9v^5 - 7v^4)$

12) $(-14n^3 + 13n - 12n^5) + (4n^5 + 7n^3 - 5)$

Find each product.

13) $(4n - 1)(3n - 1)$

14) $(x - 1)(5x + 1)$

15) $(4k + 1)(k + 1)$

Factor each.

16) $y = x^3 - 2x^2 - 8x$

17) $y = x^3 + 3x^2 - 4x$

18) $y = x^3 + 6x^2 + 8x$

Evaluate each function at the given value.

19) $f(a) = a^4 - a^3 - 15a^2 + 18a - 9$ at $a = -4$

20) $f(a) = a^3 - 14a + 10$ at $a = 3$

21) $f(n) = n^3 + 7n^2 + 10n - 9$ at $n = -3$

Find all roots.

22) $x^6 + 3x^4 - 4x^2 - 12 = 0$

23) $x^6 - 4x^4 - x^2 + 4 = 0$

24) $x^5 - 64x^2 = 0$

Evaluate each function.

25) $h(x) = 3x^2 - 1$; Find $h(1)$

26) $p(a) = a^2 + 3$; Find $p(-6)$

27) $w(t) = t^2 - 2$; Find $w(7)$

Perform the indicated operation.

28) $h(x) = x - 3$
$g(x) = 3x + 1$
Find $(h + g)(x)$

29) $h(x) = x - 2$
$g(x) = x^3 - 2x^2$
Find $\left(\frac{h}{g}\right)(x)$

30) $h(x) = -3x - 2$
$g(x) = x + 5$
Find $(h + g)(x)$