Factoring #1: Factoring out the GCF Name_____ ID: 1

Factor out the GCF. If you can't factor it write "prime" Period____

Factor the common factor out of each expression.

1) $16p^4 + 4p^3$ $= 4p^3(4p+1)$

2) $9x + 36$ $= 9(x+4)$

3) $63 + 45b$ $45b+63$ $= 9(5b+7)$

4) $6n^3 - 3n^5$ S.F. $-3n^5+6n^3$ $= -3n^3(n^2-2)$

5) $-6r^5 - 6r^4$ $= -6r^4(r+1)$

6) $63x^{12} - 35x^6$ $7x^6(9x^6-5)$

7) $14a + 21a^2 + 21a^3$ $21a^3+21a^2+14a$ $= 7a(3a^2+3a+2)$

8) $10n^3 - 9n^2 + n$ $n(10n^2-9n+1)$

9) $-28v^2 - 8v - 36$ $-4(7v^2+2v+9)$

10) $-8x^7 + 24x^6 + 12x^5$ $-4x^5(2x^2-6x-3)$

11) $20 - 35n^2 - 20n^3$ $-20n^3-35n^2+20$ $-5(4n^3+7n^2-4)$

12) $9x^6 - 63x^3 - 90x^2$ $9x^2(x^4-7x-10)$

13) $-3k^3 + 15k^2 - 6k$ $-3k(k^2-5k+2)$

14) $50p^3 + 50p^2 - 20$ $10(5p^3+5p^2-2)$

15) $32n^3 + 28n - 20$ $4(8n^3+7n-5)$

16) $-90x^5 + 100x + 60$ $-10(9x^5-10x-6)$

17) $3m^2 + 9m + 27$ $3(m^2+3m+9)$

18) $12r^2 + 4r - 12$ $4(3r^2+r-3)$

19) $64 + 40x^2 + 72x$ $40x^2+72x+64$ $8(5x^2+9x+8)$

20) $-18n^2 + 15n - 15$ $-3(6n^2-5n+5)$