

GCF & Zero Product Property

Date _____ Period _____

Factor the polynomial by finding the GCF. Get in standard form, and factor out negative L.C.'s.

1) $32b + 8$

2) $-5n + 15$

3) $35a^4 + 30a^2$

4) $6n^3 + 48n^2$

5) $27x^4y + 45x^2$

6) $8ab^4 + 32ab^3$

7) $30x^2 + 24x + 21$

8) $21k^4 + 21k^2 - 7k$

9) $72n^3 + 8n^2 + 40n - 56$

10) $18m^3 - 10m^4 + 12m^5 + 12m^9$

11) $40uv^3 + 100u^2 + 70uv$

12) $2u^6v - 9u^2v - 2uv^2 + 6uv$

13) $-8z^7y + 24z^6x$

14) $40a^3b^2c^2 - 30a^5c - 20a^3b$

Solve each equation by using the zero product property. Find the GCF when necessary.

15) $(n + 6)(n - 2) = 0$

16) $(x - 5)(x + 2) = 0$

17) $p(p - 5) = 0$

18) $(p + 5)^2 = 0$

19) $(k - 5)(3k - 5) = 0$

20) $(8n - 5)(3n + 7) = 0$

21) $3n^2 - 18n = 0$

22) $4b^2 + 4b = 0$

23) $5x^2 - 35x = 0$

24) $6n^2 + 15n = 0$

25) $4n^2 = 8n$

26) $4r^2 - 16r = 6r$