

Assignment

Date _____ Period _____

Factor each completely. (warm-up)

1) $b^3 + 6b^2 - 27b$

2) $-x^2 - 2x + 63$

3) $6x^4 - 78x^3 + 252x^2$

4) $-5p^3 - 45p^2 + 50p$

Factor each completely.

5) $5a^3 - 11a^2 + 6a$

6) $5n^2 + 18n + 9$

7) $18m^2 + 156m + 96$

8) $7b^3 + 33b^2 + 20b$

9) $4n^2 + 15n - 54$

10) $9r^3 - 20r^2 + 30r$

11) $-12b^3 - 10b^2 + 12b$

12) $27k^2 + 9k - 6$

Factor each completely. (Bottoms up)

13) $5b^2 - 14b + 8$

14) $8v^3 - 100v^2 + 200v$

15) $20x^2 - 76x - 120$

16) $-2x^4 + 29x^3 - 90x^2$

17) $27x^3 + 9x^2 - 6x$

18) $54n^3 - 144n^2 - 120n$

19) $-36k^3 - 168k^2 - 160k$

20) $36n^2 + 78n - 30$

Answers to Assignment (ID: 1)

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|------------------------|----------------------|-----------------------|---------------------|
| 1) $b(b+9)(b-3)$ | 2) $-(x-7)(x+9)$ | 3) $6x^2(x-6)(x-7)$ | 4) $-5p(p-1)(p+10)$ |
| 5) $a(5a-6)(a-1)$ | 6) $(5n+3)(n+3)$ | 7) $6(3m+2)(m+8)$ | 8) $b(7b+5)(b+4)$ |
| 9) $(n+6)(4n-9)$ | 10) $r(9r^2-20r+30)$ | 11) $-2b(2b+3)(3b-2)$ | |
| 12) $3(3k+2)(3k-1)$ | 13) $(5b-4)(b-2)$ | 14) $4v(2v-5)(v-10)$ | 15) $4(5x+6)(x-5)$ |
| 16) $-x^2(2x-9)(x-10)$ | 17) $3x(3x-1)(3x+2)$ | 18) $6n(3n+2)(3n-10)$ | |
| 19) $-4k(3k+10)(3k+4)$ | 20) $6(2n+5)(3n-1)$ | | |