

Q's worksheet

Date _____ Period _____

Factor each completely.

1) $48r^3 - 6r^2 + 8r - 1$

2) $35x^3 + 20x^2 - 42x - 24$

3) $27p^3 - 9p^2 + 9p - 3$

4) $4n^6 - 6n^5 + 8n^4 - 12n^3$

5) $49x^2 - 1$

6) $16n^2 - 81$

7) $125a^2 - 180$

8) $294p^3 - 96p$

9) $k^2 - 11k + 30$

10) $5p^2 - 15p - 20$

11) $3m^2 + 11m - 42$

12) $7x^2 - 10x + 3$

13) $-12v^2 - 20v$

14) $-9a^2 + 18a - 5$

15) $10n^2 - 17n - 63$

16) $48n^2 + 186n - 270$

Solve each equation by factoring.

17) $b^2 = -2b$

18) $x^2 + x = 20$

19) $2x^2 - 2x = 4$

20) $5n^2 = -10n + 175$

21) $15n^2 = 13n + 6$

22) $14v^2 = 78v + 36$

Q's worksheet

Date _____ Period _____

Factor each completely.

1) $48r^3 - 6r^2 + 8r - 1$

$(6r^2 + 1)(8r - 1)$

2) $35x^3 + 20x^2 - 42x - 24$

$(5x^2 - 6)(7x + 4)$

3) $27p^3 - 9p^2 + 9p - 3$

$3(3p^2 + 1)(3p - 1)$

4) $4n^6 - 6n^5 + 8n^4 - 12n^3$

$2n^3(n^2 + 2)(2n - 3)$

5) $49x^2 - 1$

$(7x + 1)(7x - 1)$

6) $16n^2 - 81$

$(4n + 9)(4n - 9)$

7) $125a^2 - 180$

$5(5a + 6)(5a - 6)$

8) $294p^3 - 96p$

$6p(7p + 4)(7p - 4)$

9) $k^2 - 11k + 30$

$(k - 6)(k - 5)$

10) $5p^2 - 15p - 20$

$5(p + 1)(p - 4)$

11) $3m^2 + 11m - 42$

$(3m - 7)(m + 6)$

12) $7x^2 - 10x + 3$

$(7x - 3)(x - 1)$

13) $-12v^2 - 20v$

$-4v(3v + 5)$

14) $-9a^2 + 18a - 5$

$-(3a - 5)(3a - 1)$

15) $10n^2 - 17n - 63$

$(2n - 7)(5n + 9)$

16) $48n^2 + 186n - 270$

$6(n + 5)(8n - 9)$

Solve each equation by factoring.

17) $b^2 = -2b$

$\{-2, 0\}$

18) $x^2 + x = 20$

$\{4, -5\}$

19) $2x^2 - 2x = 4$

$\{2, -1\}$

20) $5n^2 = -10n + 175$

$\{5, -7\}$

21) $15n^2 = 13n + 6$

$\left\{\frac{6}{5}, -\frac{1}{3}\right\}$

22) $14v^2 = 78v + 36$

$\left\{-\frac{3}{7}, 6\right\}$