

Alg 2 - Factoring Review Assignment (Feb 28) HW

Date _____ Period _____

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Factor each completely. When factored, multiply your factors to verify that your answers are correct.

1) $-r^2 - r + 72$

2) $-a^2 + 17a - 70$

3) $-v^3 - 9v^2 + 10v$

4) $-m^3 + 6m^2 + 40m$

5) $3b^3 - 26b^2 + 35b$

6) $28x^2 + 208x - 128$

7) $-5r^3 + 12r^2 - 7r$

8) $-15a^3 + 102a^2 + 21a$

9) $10x^2 - 19x - 56$

10) $18x^2 + 33x - 90$

11) $-45k^3 - 255k^2 - 350k$

12) $8m^3 + 81m^2 + 81m$

13) $u^2 + 9uv + 8v^2$

14) $3x^2 + 33xy + 72y^2$

15) $28a^2 + 276ab + 216b^2$

16) $32x^2 - 140xy + 48y^2$

Solve each equation by factoring.

17) $k^2 + k - 12 = 0$

18) $x^2 - 9x + 20 = 0$

19) $a^2 + 2a + 8 = 8$

20) $a^2 - 5a + 2 = 2$

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Factor each completely. When factored, multiply your factors to verify that your answers are correct.

1) $-r^2 - r + 72$

$-(r - 8)(r + 9)$

2) $-a^2 + 17a - 70$

$-(a - 7)(a - 10)$

3) $-v^3 - 9v^2 + 10v$

$-v(v - 1)(v + 10)$

4) $-m^3 + 6m^2 + 40m$

$-m(m + 4)(m - 10)$

5) $3b^3 - 26b^2 + 35b$

$b(3b - 5)(b - 7)$

6) $28x^2 + 208x - 128$

$4(7x - 4)(x + 8)$

7) $-5r^3 + 12r^2 - 7r$

$-r(5r - 7)(r - 1)$

8) $-15a^3 + 102a^2 + 21a$

$-3a(5a + 1)(a - 7)$

9) $10x^2 - 19x - 56$

$(2x - 7)(5x + 8)$

10) $18x^2 + 33x - 90$

$3(2x - 3)(3x + 10)$

$$11) -45k^3 - 255k^2 - 350k$$
$$-5k(3k + 7)(3k + 10)$$

$$12) 8m^3 + 81m^2 + 81m$$
$$m(m + 9)(8m + 9)$$

$$13) u^2 + 9uv + 8v^2$$
$$(u + v)(u + 8v)$$

$$14) 3x^2 + 33xy + 72y^2$$
$$3(x + 8y)(x + 3y)$$

$$15) 28a^2 + 276ab + 216b^2$$
$$4(7a + 6b)(a + 9b)$$

$$16) 32x^2 - 140xy + 48y^2$$
$$4(x - 4y)(8x - 3y)$$

Solve each equation by factoring.

$$17) k^2 + k - 12 = 0$$
$$\{3, -4\}$$

$$18) x^2 - 9x + 20 = 0$$
$$\{4, 5\}$$

$$19) a^2 + 2a + 8 = 8$$
$$\{-2, 0\}$$

$$20) a^2 - 5a + 2 = 2$$
$$\{5, 0\}$$