

## Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor the common factor out of each expression.**

1)  $-56 - 49x^2y^2 + 63x^2$

2)  $-16x^3y^4 - 40x^3y + 12x^2y$

3)  $-32x^4y^3 + 24x^6y + 8x^3y$

4)  $-9xy^3 - 2xy^2 - 9xy$

**Factor each completely.**

5)  $x^2 + 3x - 40$

6)  $v^2 + 7v - 18$

7)  $2r^2 + 22r + 48$

8)  $3v^2 + 21v + 30$

9)  $10n^2 + 83n + 24$

10)  $10n^2 + 33n + 27$

11)  $7b^2 + 3b - 10$

12)  $5x^2 - 43x - 70$

13)  $18n^2 + 120n - 600$

14)  $10v^2 + 95v + 225$

15)  $n^2 - 1$

16)  $25x^2 - 1$

17)  $4x^2 - 20x + 25$

18)  $r^2 + 4r + 4$

**Solve each equation by factoring.**

19)  $a^2 = 12 - 4a$

20)  $x^2 - 14 = -5x$

21)  $m^2 = -m$

22)  $x^2 + 30 = -11x$

**Solve each equation by completing the square.**

23)  $x^2 + 18x - 70 = -7$

24)  $x^2 - 18x + 38 = 6$

25)  $x^2 - 20x + 91 = -5$

26)  $r^2 - 8r + 17 = 3$

**Solve each equation with the quadratic formula.**

27)  $r^2 - 96 = 10r$

28)  $10m^2 + m = 23$

29)  $5x^2 + 7x = 13$

30)  $5v^2 = 4v + 12$

Assignment

Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor the common factor out of each expression.**

1)  $-56 - 49x^2y^2 + 63x^2$

$7(-8 - 7x^2y^2 + 9x^2)$

2)  $-16x^3y^4 - 40x^3y + 12x^2y$

$4x^2y(-4xy^3 - 10x + 3)$

3)  $-32x^4y^3 + 24x^6y + 8x^3y$

$8x^3y(-4xy^2 + 3x^3 + 1)$

4)  $-9xy^3 - 2xy^2 - 9xy$

$-xy(9y^2 + 2y + 9)$

**Factor each completely.**

5)  $x^2 + 3x - 40$

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

6)  $v^2 + 7v - 18$

$(v + 9)(v - 2)$

7)  $2r^2 + 22r + 48$

$2(r + 8)(r + 3)$

8)  $3v^2 + 21v + 30$

$3(v + 5)(v + 2)$

9)  $10n^2 + 83n + 24$

$(n + 8)(10n + 3)$

10)  $10n^2 + 33n + 27$

$(2n + 3)(5n + 9)$

11)  $7b^2 + 3b - 10$

$(7b + 10)(b - 1)$

12)  $5x^2 - 43x - 70$

$(5x + 7)(x - 10)$

13)  $18n^2 + 120n - 600$

$6(3n - 10)(n + 10)$

14)  $10v^2 + 95v + 225$

$5(2v + 9)(v + 5)$

15)  $n^2 - 1$

$(n + 1)(n - 1)$

16)  $25x^2 - 1$

$(5x + 1)(5x - 1)$

17)  $4x^2 - 20x + 25$

$(2x - 5)^2$

18)  $r^2 + 4r + 4$

$(r + 2)^2$

**Solve each equation by factoring.**

19)  $a^2 = 12 - 4a$

$\{-6, 2\}$

20)  $x^2 - 14 = -5x$

$\{2, -7\}$

21)  $m^2 = -m$

$\{-1, 0\}$

22)  $x^2 + 30 = -11x$

$\{-5, -6\}$

**Solve each equation by completing the square.**

23)  $x^2 + 18x - 70 = -7$

$\{3, -21\}$

24)  $x^2 - 18x + 38 = 6$

$\{16, 2\}$

25)  $x^2 - 20x + 91 = -5$

$\{12, 8\}$

26)  $r^2 - 8r + 17 = 3$

$\{5.414, 2.586\}$

**Solve each equation with the quadratic formula.**

27)  $r^2 - 96 = 10r$

$\{16, -6\}$

28)  $10m^2 + m = 23$

$\{1.467, -1.567\}$

29)  $5x^2 + 7x = 13$

$\{1.058, -2.458\}$

30)  $5v^2 = 4v + 12$

$\{2, -1.2\}$