

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_

## Factoring Polynomials with GCF

Write each expression in product form using the GCF

1  $8m^3 + 16m^2n$

2  $2x(x + 4) - 3(x + 4)$

3  $4y(y - 3b) - 2(y - 3b)$

4  $63m^6 - 49m^5 - 21m$

5  $14a + 21a^2 + 21a^3$

6  $x(x + 2) + 7(x + 2)$

7  $3x^4 - 21x^3 + 10x^2$

8  $(3n + 1)(4n + 1) + (n + 2)(4n + 1)$

9  $50p^3 + 50p^2 - 20$

10  $6x^4y^5 - 2x^2y^3 + 14x^3y^4$

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## Factoring Polynomials with GCF

### Answers

1  $8m^3 + 16m^2n$

$8m^2(m + 2n)$

2  $2x(x + 4) - 3(x + 4)$

$(x + 4)(2x - 3)$

3  $4y(y - 3b) - 2(y - 3b)$

$(y - 3b)(4y - 2)$

4  $63m^6 - 49m^5 - 21m$

$7m(9m^5 - 7m^4 - 3)$

5  $14a + 21a^2 + 21a^3$

$7a(2 + 3a + 3a^2)$

6  $x(x + 2) + 7(x + 2)$

$(x + 2)(x + 7)$

7  $3x^4 - 21x^3 + 10x^2$

$x^2(3x^2 - 21x + 10)$

8  $(3n + 1)(4n + 1) + (n + 2)(4n + 1)$

$16n^2 + 16n + 3$

9  $50p^3 + 50p^2 - 20$

$(4n + 1)\{(3n + 1) + (n + 2)\}$

10  $6x^4y^5 - 2x^2y^3 + 14x^3y^4$

$2x^2y^2(3x^2y^2 - 1 + 7xy)$