Math 2 Name_____

Math 2 Unit 2.2 Examples of Finding the GCF (Factoring out)

Factor the common factor out of each expression.

1) $-12b^2a + 6b$

2) $54y^2x^6 + 45y^2$

3) $21y^4x + 7y^2$

4) $-35nm^2 - 14n$

5) $-40p^7 + 50p^3 + 40p^2$

6) $-7r^3 - 35r + 28$

7) $50k^2 + 30k + 100$

8) $40p^5 - 50p^3 - 40p$

9) $-24y^2z + 36y^6zx^2 - 40y^5z^2x^2$

10) $9y^2z^3 - 9y^3z - 54y^2zx$

11) $21h^4kj - 21h^2k^2 + 28h^5k^3j$

12) $-30h^9 - 21hjk^3 + 9h^5$

13) $4y^3z + 36y^3z^3x + 8y^5z^3 - 4y^6z^2x$

14) $-9m^5n^2 + 10m^2n^3 + 4mn^2p^2 + 2mn$

15) $-21x^{11}yz^4 + 6x^5y^2z^2 - 24x^4y^2z^3 - 18x^4y^3z$

16) $15p^3r^2 + 9p^3q + 3p^2q^2 - 9p^2q$

Math 2 Name_____

Math 2 Unit 2.2 Examples of Finding the GCF (Factoring out)

Factor the common factor out of each expression.

1) $-12b^2a + 6b$

$6b(-2ab + 1)$

2) $54y^2x^6 + 45y^2$

$9y^2(6x^6 + 5)$

3) $21y^4x + 7y^2$

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

4) $-35nm^2 - 14n$

$-7n(5m^2 + 2)$

5) $-40p^7 + 50p^3 + 40p^2$

$10p^2(-4p^5 + 5p + 4)$

6) $-7r^3 - 35r + 28$

$7(-r^3 - 5r + 4)$

7) $50k^2 + 30k + 100$

$10(5k^2 + 3k + 10)$

8) $40p^5 - 50p^3 - 40p$

$10p(4p^4 - 5p^2 - 4)$

9) $-24y^2z + 36y^6zx^2 - 40y^5z^2x^2$

$4y^2z(-6 + 9x^2y^4 - 10x^2y^3z)$

10) $9y^2z^3 - 9y^3z - 54y^2zx$

$9y^2z(z^2 - y - 6x)$

11) $21h^4kj - 21h^2k^2 + 28h^5k^3j$

$7h^2k(3h^2j - 3k + 4h^3jk^2)$

12) $-30h^9 - 21hjk^3 + 9h^5$

$3h(-10h^8 - 7jk^3 + 3h^4)$

13) $4y^3z + 36y^3z^3x + 8y^5z^3 - 4y^6z^2x$

$4y^3z(1 + 9xz^2 + 2y^2z^2 - xy^3z)$

14) $-9m^5n^2 + 10m^2n^3 + 4mn^2p^2 + 2mn$

$mn(-9m^4n + 10mn^2 + 4np^2 + 2)$

15) $-21x^{11}yz^4 + 6x^5y^2z^2 - 24x^4y^2z^3 - 18x^4y^3z$

$3x^4yz(-7x^7z^3 + 2xyz - 8yz^2 - 6y^2)$

16) $15p^3r^2 + 9p^3q + 3p^2q^2 - 9p^2q$

$3p^2(5pr^2 + 3pq + q^2 - 3q)$