

## 8.1 - 8.2 GCF, Factoring, Factor by Grouping

**Find the GCF of the terms provided.**

1) a. 45, 27

b. 42, 21

c. 14, 29

d. 28, 49

a) 9

b) 21

c) 1

d) 7

3) a.  $2xy^2$ ,  $29x^2y$

b.  $49x^5y^3$ ,  $49x^3y^5$

c.  $9x^2yz$ ,  $81x^2y^2$

d.  $10x^3y$ ,  $15x^5y^3z^4$

a)  $xy$

b)  $49x^3y^3$

c)  $9x^2y$

d)  $5x^3y$

2) a.  $14x^2$ ,  $24x^3$

b.  $21x^6$ ,  $35x^5$

c.  $42y^2$ ,  $30y^5$

d.  $22y^9$ ,  $44y^2$

a)  $2x^2$

b)  $7x^5$

c)  $6y^2$

d)  $22y^2$

4) a.  $12x^3y^4$ ,  $20x^5y^2$ ,  $28x^3y^7$

b.  $7x^4y$ ,  $21x^5y^5$ ,  $35x^2y^7$

c.  $16x^8y^{10}$ ,  $24x^5y^4$ ,  $28x^4y^8$

d.  $36x^4y^3$ ,  $20y^5z^8$ ,  $40x^3y^4z^5$

a)  $4x^3y^2$

b)  $7x^2y$

c)  $4x^4y^4$

d)  $4y^3$

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

5)  $-60k^2 - 6$

$-6(10k^2 + 1)$

6)  $6b + 12$

$6(b + 2)$

7)  $24 + 28v$

$4(6 + 7v)$

8)  $-9x^2y^3 + 54xy^3$

$9xy^3(-x + 6)$

9)  $8ab - 32a$

$8a(b - 4)$

10)  $6ba - 7b^2$

$b(6a - 7b)$

11)  $6a^2 + 36a - 6$

$6(a^2 + 6a - 1)$

12)  $-21b^4 + 30b + 3$

$3(-7b^4 + 10b + 1)$

