

5.9

Greatest Common Factor of Two Monomials

• Example 1

Find the GCF for each set of terms.

(a) 9 and 12 The largest number that is a factor of both is 3.

(b) 10, 25, 150 The GCF is 5.

(c) x^4 and x^7 The largest power common to the two variables is x^4 .

By convention, x^4 is called the GCF of x^4 and x^7 .

(d) $12a^3$ and $18a^2$ The GCF is $6a^2$.

By convention, the GCF of $12a^3$ and $18a^2$ is the product of the GCF of 12 and 18, which is 6, and the GCF of a^3 and a^2 , which is a^2 .

● ● ● CHECK YOURSELF 1

Find the GCF for each set of terms.

a. 14, 24

b. 9, 27, 81

c. a^9, a^5

d. $10x^5, 35x^4$

● ● ● CHECK YOURSELF ANSWER

1. (a) 2; (b) 9; (c) a^5 ; (d) $5x^4$.

5.9 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____
2. _____
3. _____
4. _____
5. _____
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16. _____
17. _____
18. _____

Find the greatest common factor for each of the following sets of terms.

- | | |
|---------------------------------------|---|
| 1. 10, 12 | 2. 15, 35 |
| 3. 16, 32, 88 | 4. 55, 33, 132 |
| 5. x^2, x^5 | 6. y^7, y^9 |
| 7. a^3, a^6, a^9 | 8. b^4, b^6, b^8 |
| 9. $5x^4, 10x^5$ | 10. $8y^9, 24y^3$ |
| 11. $8a^4, 6a^6, 10a^{10}$ | 12. $9b^3, 6b^5, 12b^4$ |
| 13. $9x^2y, 12xy^2, 15x^2y^2$ | 14. $12a^3b^2, 18a^2b^3, 6a^4b^4$ |
| 15. $15ab^3, 10a^2bc, 25b^2c^3$ | 16. $9x^2, 3xy^3, 6y^3$ |
| 17. $15a^2bc^2, 9ab^2c^2, 6a^2b^2c^2$ | 18. $18x^3y^2z^3, 27x^4y^2z^3, 81xy^2z$ |