

Section 2.3 – Factoring out Monomials

Problem Set 3

Find the greatest common factors of the following pairs of monomials.

1. $-2wx^5$ and $-11wx^3y^2z^3$
2. $6xy$ and $12w^4$
3. $6qrs^3t$ and $8q^5r^2s^4t$
4. a^2 and $-4a^2$
5. $11b^2c^2$ and $a^3b^3c^2$
6. $-2a^2b^4cd$ and $-9bcd$
7. $-6w^5x^3y^3$ and $-12w^5x^4$
8. $-8xy$ and $-7w^4xy$
9. $4qr^3$ and $8q^2r^3$
10. $-5q^4sr^3$ and $-2q^2r^2s^2$
11. $-5w^4x^2$ and $-8w^5x^2$
12. $-a^5bd^4$ and $9a^4$

Factor the following expressions.

13. $22q^{131}r^4 - 66q^{13}r^4 + 99q^3r^4$
14. $78q^{15}r^6 + 78q^{13}r^6 - 36q^{16}r^{19} + 12q^{17}r^9$
15. $-3w^4 + 4w^{81} + w^9$
16. $-196b^7 + 182b^6 - 42b^5 + 168b^4$
17. $45b^8 - 165b^7 - 135b^6 - 60b^5 + 195b^4$
18. $-165a^{15} + 15a^6$
19. $120w^8x^4 + 30w^{13}x^4 + 40w^{11}x^4$
20. $63a^{15}b^4 + 70a^{54}b^4 + 28a^6b^4 + 77a^9b^4$
21. $66a^{14}b^5 + 33a^{13}b^{15}$
22. $a^6 - a^5 - 24a^4 + 2a^3 + 6a^2 - 36a$
23. $-60w^7 + 105w^6 + 135w^5 - 120w^4 + 180w^2$
24. $6w^{11}x + 3w^{15}x^{16}$