

# Dividing Binomials by Monomials

Divide the following.

$$\textcircled{1} (3a^5b + a^2b^4) \div ab$$

$$\textcircled{2} (30pq^5 + 3pq^3) \div 3pq^2$$

$$\textcircled{3} (4x^2y^3 + 2y^2) \div 2y$$

$$\textcircled{4} (4m^4 + 20m^2) \div 2m^2$$

$$\textcircled{5} (2x^2z^2 - 8xz) \div -2xz^2$$

$$\textcircled{6} (24x^9 + 16x^8) \div 8x^2$$

$$\textcircled{7} (-8x^3y^4z^2 + 4x^2y^5z^6) \div 4xyz$$

$$\textcircled{8} (p^2 - 2p) \div p$$

$$\textcircled{9} (16r^4 - 12r^3) \div 4r^2$$

$$\textcircled{10} (6n^{10}p^{12} - 4n^8p^5) \div 2n^6p^4$$

$$\textcircled{11} (40n^{12} - 40n^{11} + 20n) \div 20n$$

$$\textcircled{12} (14q^4p + 10q^2p^2 + 6q) \div 2q$$

$$\textcircled{13} (15n^7 + 20n^5 + 5n^3) \div 5$$

$$\textcircled{14} (21m^{12} - 42m^7 - 63m^6) \div 21m^4$$

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## Answers

$$\textcircled{1} (3a^5b + a^2b^4) \div ab = 3a^4 + ab^3$$

$$\textcircled{2} (30pq^5 + 3pq^3) \div 3pq^2 = 10q^3 + q$$

$$\textcircled{3} (4x^2y^3 + 2y^2) \div 2y = 2x^2y^2 + y$$

$$\textcircled{4} (4m^4 + 20m^2) \div 2m^2 = 2m^2 + 10$$

$$\textcircled{5} (2x^2z^2 - 8xz) \div -2xz^2 = 4 - x$$

$$\textcircled{6} (24x^9 + 16x^8) \div 8x^2 = 3x^7 + 2x^6$$

$$\textcircled{7} (-8x^3y^4z^2 + 4x^2y^5z^6) \div 4xyz = xy^4z^5 - 2x^2y^3z$$

$$\textcircled{8} (p^2 - 2p) \div p = p - 2$$

$$\textcircled{9} (16r^4 - 12r^3) \div 4r^2 = 4r^2 - 3r$$

$$\textcircled{10} (6n^{10}p^{12} - 4n^8p^5) \div 2n^6p^4 = 3n^4p^8 - 2n^2p$$

$$\textcircled{11} (40n^{12} - 40n^{11} + 20n) \div 20n = 2n^{11} - 2n^{10} + 1$$

$$\textcircled{12} (14q^4p + 10q^2p^2 + 6q) \div 2q = 7q^3p + 5qp^2 + 3$$

$$\textcircled{13} (15n^7 + 20n^5 + 5n^3) \div 5 = 3n^7 + 4n^5 + n^3$$

$$\textcircled{14} (21m^{12} - 42m^7 - 63m^6) \div 21m^4 = m^8 - 2m^3 - 3m^2$$