

Name: .....

# Factoring Monomials from Polynomials

Factor each polynomial completely

1	$6p^2q^2 + 6pq =$	2	$a^{20} + a^{12} =$
3	$90u^8v^7w - 18u^9v^5 =$	4	$18p + 60mp - 24mp^3 =$
5	$25x^5 + 10x^4 + 5x^2 =$	6	$49g^6 - 35g^4 + 70g^3 =$
7	$8x^2y^2 + 8 =$	8	$6m^5n + 2mn^3 - 6n =$
9	$20z^4 + 55z^5 =$	10	$16 + 68b =$
11	$-6p^5 + 3p^3 =$	12	$24x^5y^5 - 27x^8y^3 =$
13	$15h^3 + 12h =$	14	$55xy^3z + 5x^3yz =$
15	$25q + 45p + 65 =$	16	$2a^{12}b^2 + 8a^8b - 8a^9b^3 =$
17	$12ts^3 - 15s^3t^4 + 15t^5s =$	18	$15u^5 - 3u^2 =$

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## Answers

1	$6p^2q^2 + 6pq = 6pq(pq + 1)$	2	$a^{20} + a^{12} = a^{12}(a^8 + 1)$
3	$90u^8v^7w - 18u^9v^5 = 18u^8v^5(5v^2w - u)$	4	$18p + 60mp - 24mp^3 = 6p(3 + 10m - 4mp^2)$
5	$25x^5 + 10x^4 + 5x^2 = 5x^2(5x^3 + 2x^2 + 1)$	6	$49g^6 - 35g^4 + 70g^3 = 7g^3(7g^3 - 5g + 10)$
7	$8x^2y^2 + 8 = 8(x^2y^2 + 1)$	8	$6m^5n + 2mn^3 - 6n = 2n(3m^5 + mn^2 - 3)$
9	$20z^4 + 55z^5 = 5z^4(4 + 11z)$	10	$16 + 68b = 4(4 + 17b)$
11	$-6p^5 + 3p^3 = 3p^3(-2p^2 + 1)$	12	$24x^5y^5 - 27x^8y^3 = 3x^5y^3(8y^2 - 9x^3)$
13	$15h^3 + 12h = 3h(5h^2 + 4)$	14	$55xy^3z + 5x^3yz = 5xy^3z(11y^2 + x^3)$
15	$25q + 45p + 65 = 5(5q + 9p + 13)$	16	$2a^{12}b^2 + 8a^8b - 8a^9b^3 = 2a^8b(a^4b + 4 - 4ab^2)$
17	$12ts^3 - 15s^3t^4 + 15t^5s = 3st(4s^2 - 5s^2t^3 + 5t^4)$	18	$15u^5 - 3u^2 = 3u^2(5u^3 - 1)$