

MasterMath

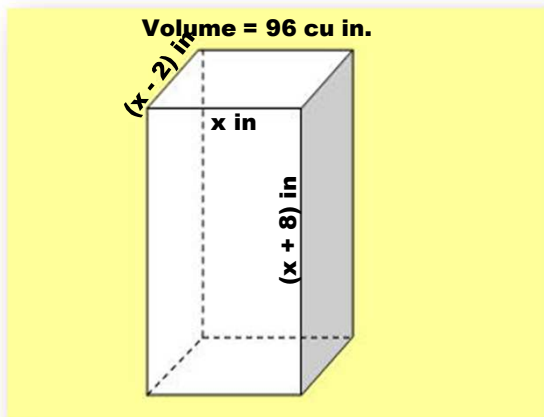
Factoring Special Products

Name _____
Date _____

1. Factor these polynomials completely:

Polynomial	Factor	Factor	Factor
$3x^5 + 3x^4 - 90x^3$	$3x^3$	$x + 6$	$x - 5$
$3z^5 - 48z^3$	$3z^3$	$z + 4$	$z - 4$
$12k - 3k^3$	$3k$	$2 + k$	$2 - k$
$80x^8 - 45x^6$	$5x^6$	$4x + 3$	$4x - 3$
$s^4 - s^2$	s^2	$s + 1$	$s - 1$
$7a^3b^3 - 63ab^3$	$7ab$	$ab - 3b$	$ab + 3b$
$75c^9 - 3c^7$	$3c^7$	$5c + 1$	$5c - 1$
$3m^4 + 24m^3 + 48m^2$	$3m^2$	$(m + 4)^2$	
$-4n^3p^3 + 24n^2p^2 - 36np$	$-4np$	$(np - 3)^2$	
$n^3 - 5n^2 - 4n + 20$	$n^2 - 4$	$n - 5$	
$32k^4 - 8k^2$	$8k^2$	$2k + 1$	$2k - 1$
$2x^3 + 10x^2 - 40 - 8x$	$2x^2 - 8$	$x + 5$	
$z^3 - 81z$	z	$z + 9$	$z - 9$
$x^4 - 100x^2$	x^2	$x + 10$	$x - 10$
$2y^5 + 2y^4 - 144y^3$	$2y^3$	$y + 9$	$y - 8$
$x^3 + 2x^2y - x - 2y$	$x^2 - 1$	$x + 2y$	
$8v^3 - 4v^2w - 18v + 9w$	$2v - w$	$4v^2 - 9$	
$4x^2 - x + 12xy - 3y$	$x + 3y$	$4x - 1$	

2. Find x:



4 in

3. Completely factor:

$$32y^2z - 96xyz + 72x^2z$$

Factor	Factor	Factor
$4z$	$(2y - 3x)^2$	