

Workshop (Identities 6 and 7)

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Eighth grade



Name: _____

PROBLEM	ANSWER
$\left(\frac{4}{3}x + \frac{12}{5}y\right)^3 =$	$1000x^3 - 45x^2y + \frac{27}{40}xy^2 - \frac{27}{8000}$
$\left(\frac{14}{3}x - \frac{21}{2}y\right)^3 =$	$512x^6 - 3x^4y^2 + \frac{3}{512}x^2y^4 - \frac{1}{262144}$
$(3x^2 - 5y^6) =$	$\frac{64}{9}x^3 + \frac{64}{5}x^2y + \frac{576}{25}xy^2 + \frac{1728}{125}y^3$
$\left(\frac{21}{5}x + \frac{10}{42}y\right)^3 =$	$729x^{12} + \frac{1}{531441x^6} + 3x^6 + \frac{1}{243}$
$\left(10x - \frac{3}{20}y\right)^3 =$	$\frac{2744}{27}x^3 - 686x^2 + \frac{3087}{2}x - \frac{9261}{8}$
$\left(4x + \frac{9}{16}y\right)^3 =$	$9x^6 - 125y^{12} - 135x^4y^6 + 225x^2y^{12}$
$\left(8x^2 - \frac{1}{64}y^2\right)^3 =$	$\frac{125}{9261}y^3 + \frac{63}{5}x^2y + \frac{5}{7}xy^2 + \frac{9261}{125}x^3$
$\left(9x^4 + \frac{1}{81x^2}\right)^3 =$	$64x^3 + \frac{729}{4096}y^3 + 27x^2y + \frac{243}{64}xy^2$