

**Answer Bank – Each answer will be used once**

Min: -34 @ (-2, -6) Max: 27 @ (1, 5)	-6	-74	$4\sqrt{3}$	2x2
729	(313, -97) $\begin{bmatrix} 2 & 7 \\ 1 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -53 \\ 22 \end{bmatrix}$	Not possible	$6x^5$	$3(5) - (-1)(0) = 15$
$\begin{bmatrix} -12 & -3 \\ 9 & 0 \end{bmatrix}$	3X2	$16a^6b^4$	$3xy^6$	4
$\frac{3\sqrt{6}}{4}$	$64a^6b^{24}c^{12}$	Min: -10 @ (-2, -4) Max: 40 @ (4, -2)	$xy^2$	-44
	1	Not possible	$\begin{bmatrix} -1/4 & 5/4 \\ -3/4 & 11/4 \end{bmatrix}$	Does not exist
2x2	Not possible	$\frac{y}{x^2}$		3x2
$120\sqrt{3}$	$\frac{9x^4}{y^{16}}$	(-5, -1, 0) $\begin{bmatrix} 3 & 2 & 0 \\ 3 & 2 & 1 \\ 2 & 1 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 13 \\ 13 \\ 9 \end{bmatrix}$	$(4)(0) - (-3)(1) = 3$	16
$x \leq 6$ $y \geq 2$ $y \leq 4$ $y \leq \frac{1}{3}x + 2$	X=8, y = -3 W = 3, z = -2	$\begin{bmatrix} 5 & 5 \\ -1 & 5 \\ -9 & 0 \end{bmatrix}$	Min: 2 @ (0, 2) Max: 20 @ (10,0)	$\frac{4y}{x}$
3x2	$25\sqrt{2}$			