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| --- | --- |
| **Fill in the Blanks** | **Translations of Graphs** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $y=f(x)$ **is translated to…** | **Vector** | **Translation in words** | $y=x^{3}$ **is translated to…** | $y=3x+4$ **is translated to…** | $(-2, 5)$ **is translated to…** |
| $$y=f\left(x\right)-5$$ |  | 5 units in the direction of the negative y-axis |  | $$y=3x-1$$ |  |
| $$y=f\left(x-3\right)$$ |  |  |  |  |  |
|  |  | 1 unit in the direction of the negative x-axis |  |  |  |
| $$y=f\left(x+5\right)+1$$ |  |  |  |  |  |
|  | $$\left(\begin{matrix}0\\-2\end{matrix}\right)$$ |  |  |  |  |
|  |  |  | $$y=(x-4)^{3}$$ |  |  |
|  |  |  |  |  | $$(-2, 11)$$ |
|  |  |  |  |  | $$(0, 0)$$ |