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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| $y=f(x)$ **is transformed to…** | **Stretches in words** | $y=\sin((x))$ **is transformed to…** | $y=x^{2}(x+1)$**is transformed to…** | $(-2, 5)$ **is transformed to…** |
| $$y=3f\left(x\right)$$ | Stretch by a scale factor of 3 in the vertical direction |  | $$y=3x^{2}(x+1)$$ |  |
| $$y=f(2x)$$ |  |  |  |  |
|  | Stretch by a scale factor of 5 in the vertical direction |  |  |  |
| $$y=f\left(\frac{x}{4}\right)$$ |  |  |  |  |
| $$y=2f(3x)$$ |  |  |  |  |
|  |  | $$y=\sin(\left(\frac{x}{10}\right))$$ |  |  |
|  |  |  | $$y=16x^{2}(4x+1)$$ |  |
|  |  |  |  | $$\left(-3, 30\right)$$ |