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| **Fill in the Blanks** | **Graphical Inequalities and Regions** |

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| $f(x)$ **and** $g(x)$ | **Sketch of**$y=f(x)$**and** $y=g(x)$ | **Coordinates of intersection(s)** | **Solutions to**$f\left(x\right)\geq g(x)$ | **Shade the region given by:** |
| $$f\left(x\right)=3x+1$$$$g\left(x\right)=5-x$$ |  |  |  | $$y\geq 3x+1$$$$y\leq 5-x$$and$$x\geq 0$$ |
| $$f\left(x\right)=2x-\frac{1}{2}$$$$g\left(x\right)=\frac{1}{3}x+2$$ |  |  |  | $$y\geq 2x-\frac{1}{2}$$$$y\leq \frac{1}{3}x+2$$$$x\geq 0$$and$$y\geq 0$$ |
| $$f\left(x\right)=x^{2}$$$$g\left(x\right)=x+6$$ |  |  |  | $$y\geq x^{2}$$and$$y\leq x+6$$ |
| $$f\left(x\right)=1-x^{2}$$$$g\left(x\right)=x-1$$ |  |  |  | $$y\leq 1-x^{2}$$and$$y\leq x-1$$ |
| $$f\left(x\right)=4-2x$$$$g\left(x\right)=x^{2}+x-6$$ |  |  |  | $$y\leq 4-2x$$and$$y\leq x^{2}+x-6$$ |
| $$f\left(x\right)=4-x^{2}$$$$g\left(x\right)=2x^{2}+4x$$ |  |  |  | $$y\leq 4-x^{2}$$and$$y\geq 2x^{2}+4x$$ |