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| **Describing Transformations of Graphs** |
| **(a)** | **(b)** |
| The graphs of $y=f(x)$ and $y=f\left(x\right)+a$ are shown below. Find the value of $a$. | The graphs of $y=\sin(x) $and $y=b\sin((x))$ are shown below. Find the value of $b$. |
| **(c)** | **(d)** |
| The graph of $y=f(x)$ is transformed to give the equation $y=-f\left(x\right)$. Describe the transformation in words. | The graph of $y=f(x)$ is transformed to give the equation $y=f\left(x-4\right)$. Describe the transformation in words. |
| **(e)** | **(f)** |
| The graph of $y=f(x)$ is transformed to give the equation $y=f\left(2x\right)$. Describe the transformation in words. | The graph of $y=f(x)$ is transformed to give the equation $y=f\left(-x\right)$. Describe the transformation in words. |
| **(g)** | **(h)** |
| The graph of $y=x^{2}$ has been transformed to give the graph shown below. Write down the equation of the transformed graph. | The graph of $y=\cos(x)$ has been transformed to give the graph shown below. Write down the equation of the transformed graph. |