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| **Match-Up** | **Combinations of Transformations** |

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| **1** | Reflection in the line $y=x$ followed by an enlargement about the origin of scale factor $3$ |  | **A** | $$\left(\begin{matrix}-3&0\\0&-1\end{matrix}\right)$$ |
| **2** | Rotation $90°$ anti-clockwise about the origin followed by a reflection in the $y$-axis |  | **B** | $$\left(\begin{matrix}1&-1\\1&1\end{matrix}\right)$$ |
| **3** | Stretch parallel to $y$-axis of scale factor $3$ followed by a reflection in the line $y=-x$ |   | **C** | $$\left(\begin{matrix}1&0\\0&1\end{matrix}\right)$$ |
| **4** | Rotation $45°$ anti-clockwise about the origin followed by an enlargement of scale factor $\sqrt{2}$ |  | **D** | $$\left(\begin{matrix}0&-3\\-1&0\end{matrix}\right)$$ |
| **5** | Stretch parallel to the $y$-axis of scale factor $\sqrt{3}$ followed by a reflection in the $x$-axis |  | **E** | $$\left(\begin{matrix}1&\sqrt{3}\\-\sqrt{3}&1\end{matrix}\right)$$ |
| **6** | Enlargement of scale factor $-3$ followed by a rotation $90°$ anti-clockwise about the origin |  | **F** | $$\left(\begin{matrix}0&3\\3&0\end{matrix}\right)$$ |
| **7** | Reflection in the line $y=x$ followed by a stretch parallel to the $y$-axis of scale factor $-1$ |  | **G** | $$\left(\begin{matrix}1&-1\\-\frac{\sqrt{2}}{2}&-\frac{\sqrt{2}}{2}\end{matrix}\right)$$ |
| **8** | Rotation $180°$ clockwise about $(0, 0)$ followed by a second rotation $180°$ clockwise about $(0, 0)$ |  | **H** | $$\left(\begin{matrix}0&1\\1&0\end{matrix}\right)$$ |
| **9** | Rotation $180°$ about the origin followed by a stretch parallel to the $x$-axis of scale factor $3$ |  | **I** | $$\left(\begin{matrix}-\sqrt{3}&1\\1&\sqrt{3}\end{matrix}\right)$$ |
| **10** | Enlargement of scale factor $-2$ followed by a rotation $120°$ anti-clockwise about the origin |  | **J** | $$\left(\begin{matrix}0&3\\-3&0\end{matrix}\right)$$ |
| **11** | Rotation $135°$ clockwise about the origin followed by a stretch parallel to the $x$-axis of scale factor $-\sqrt{2}$ |  | **K** | $$\left(\begin{matrix}1&0\\0&-\sqrt{3}\end{matrix}\right)$$ |
| **12** | Rotation $60°$ clockwise about $(0, 0)$ followed by an enlargement of scale factor $2$ followed by a reflection in the line $y=x$ |  | **L** | $$\left(\begin{matrix}0&1\\-1&0\end{matrix}\right)$$ |

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| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
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