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| **Match-Up** | **Rotation Matrices** |

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| **1** | $$\left(\begin{matrix}-\frac{1}{2}& \frac{\sqrt{3}}{2}\\ \frac{\sqrt{3}}{2}& -\frac{1}{2}\end{matrix}\right)$$ |  | **A** | Rotation $90°$ anti-clockwise about $(0, 0)$ |
| **2** | $$\left(\begin{matrix}-\frac{\sqrt{2}}{2}& \frac{\sqrt{2}}{2}\\ -\frac{\sqrt{2}}{2}& -\frac{\sqrt{2}}{2}\end{matrix}\right)$$ |  | **B** | Rotation $45°$ anti-clockwise about $(0, 0)$ |
| **3** | $$\left(\begin{matrix}\frac{\sqrt{2}}{2}& \frac{\sqrt{2}}{2}\\ -\frac{\sqrt{2}}{2}& \frac{\sqrt{2}}{2}\end{matrix}\right)$$ |   | **C** | Rotation $180°$ about the origin |
| **4** | $$\left(\begin{matrix}\frac{1}{2}&-\frac{\sqrt{3}}{2}\\ \frac{\sqrt{3}}{2}& \frac{1}{2}\end{matrix}\right)$$ |  | **D** | Rotation $120°$ anti-clockwise about $(0, 0)$ |
| **5** | $$\left(\begin{matrix}\frac{\sqrt{2}}{2}& -\frac{\sqrt{2}}{2}\\ \frac{\sqrt{2}}{2}& \frac{\sqrt{2}}{2}\end{matrix}\right)$$ |  | **E** | Rotation $300°$ clockwise about $(0, 0)$ |
| **6** | $$\left(\begin{matrix}0&-1\\1&0\end{matrix}\right)$$ |  | **F** | Rotation $θ°$ anti-clockwise about $(0, 0)$ |
| **7** | $$\left(\begin{matrix}-\frac{\sqrt{3}}{2}& \frac{1}{2}\\ -\frac{1}{2}& -\frac{\sqrt{3}}{2}\end{matrix}\right)$$ |  | **G** | Rotation $135°$ anti-clockwise about $(0, 0)$ |
| **8** | $$\left(\begin{matrix}-1&0\\0&-1\end{matrix}\right)$$ |  | **H** | Rotation $90°$ clockwise about the origin |
| **9** | $$\left(\begin{matrix}0&1\\-1&0\end{matrix}\right)$$ |  | **I** | Rotation $210°$ anti-clockwise about $(0, 0)$ |
| **10** | $$\left(\begin{matrix}\cos(θ)&-\sin(θ)\\\sin(θ)&\cos(θ)\end{matrix}\right)$$ |  | **J** | Rotation $45°$ clockwise about the origin |

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