8. Find the distance $d(S, G)$ between the points $S = (1, 4)$ and $G = (5, -3)$

$\sqrt{66}$

$\sqrt{67}$

$\sqrt{65}$

$2\sqrt{17}$

Solution

The distance $= \sqrt{(-3-4)^2 + (5-1)^2}$

The distance $= \sqrt{(-7)^2 + (4)^2}$

$= \sqrt{49 + 16}$

$= \sqrt{65}$