

8. Find the distance  $d(P_1, P_2)$  between the points  $P_1 = (-3, 6)$  and  $P_2 = (5, -2)$

$$\sqrt{129}$$

$$\sqrt{130}$$

$$8\sqrt{2}$$

$$\sqrt{131}$$

**Solution**

$$\text{The distance} = \sqrt{(-2-6)^2 + (5-(-3))^2}$$

$$\text{The distance} = \sqrt{(-8)^2 + (8)^2}$$

$$= \sqrt{64+64}$$

$$= 8\sqrt{2}$$