⑥ i

$A(-1,-2), B(1,0); C(-1,2), D(-3,0)$

$AB = \sqrt{(1+1)^2+(0+2)^2}$

$= \sqrt{2^2+2^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= \sqrt{2\times2\times2}$

$= 2\sqrt{2}$

$BC = \sqrt{(-1-1)^2+(2-0)^2}$

$= \sqrt{(-2)^2+2^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= \sqrt{2\times2\times2}$

$= 2\sqrt{2}$

$CD = \sqrt{(-3+1)^2+(0-2)^2}$

$= \sqrt{(-2)^2+(-2)^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= \sqrt{2\times2\times2}$

$= 2\sqrt{2}$

$DA = \sqrt{(-1+3)^2+(-2-0)^2}$

$= \sqrt{2^2+(-2)^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= 2\sqrt{2}$

$AC = \sqrt{(-1+1)^2+(2+2)^2}$

$= \sqrt{0^2+4^2}$

$= \sqrt{16}$

$= 4$

$BD = \sqrt{(-3-1)^2+(0-0)^2}$

$= \sqrt{(-4)^2+0^2}$

$= \sqrt{16}$

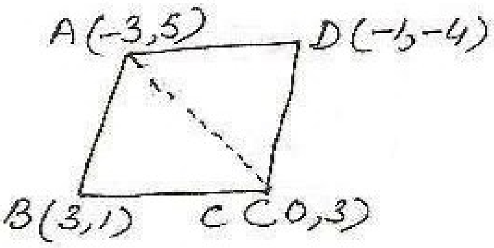
$= 4$

$\because AB = BC = CD = DA$

and $AC = BD$

$\therefore$ □ ABCD is a Square.

⑥ ii




$AB = \sqrt{(3+3)^2+(1-5)^2}$

$= \sqrt{6^2+(-4)^2}$

$= \sqrt{36+16}$

$= \sqrt{52}$

$= 2\sqrt{13}$

$BC = \sqrt{(0-3)^2+(3-1)^2}$

$= \sqrt{(-3)^2+2^2}$

$= \sqrt{13}$

$AC = \sqrt{(0+3)^2+(3-5)^2}$

$= \sqrt{9+4}$

$= \sqrt{13}$

$\because AC + BC = AB$

$\therefore$ ΔABC and hence □ABCD cannot be const