12.1) 3D coordinates

Worked example	Your turn
Find the distance from the origin to the point with coordinates $(6, 8, 24)$	Find the distance from the origin to the point with coordinates $(-3, -4, -12)$ 13
Find the distance from the origin to the point with coordinates $(-6, 0, -2)$	

Worked example

Find the distance between the points:

$A(1, 3, 5)$ and $B(-6, 0, -4)$

$C(-1, 0, 1)$ and $D(0, 0, -3)$

Your turn

Find the distance between the points:

$E(1, 3, 4)$ and $B(8, 6, -5)$

11.8 (1 dp)

Worked example

The coordinates of A and B are $(3,5,-2)$ and $(3,k,-1)$ respectively. Given that the distance from A to B is $\sqrt{2}$ units, find the possible values of k.

Your turn

The coordinates of A and B are $(5,3,-8)$ and $(1,k,-3)$ respectively. Given that the distance from A to B is $3\sqrt{10}$ units, find the possible values of k.

$k = -4$ or $k = 10$