



$$\text{slope } \overline{AB} = \frac{4}{6} = \frac{2}{3}$$

Midpoint up 2 over 3

$$(x-0)^2 + (y-0)^2 = (x-6)^2 + (y-4)^2$$

$$x^2 + y^2 = x^2 - 12x + 36 + y^2 - 8y + 16$$

$$12x - 36 = -8y + 16$$

$$3x - 9 = -2y + 4$$

$$3(3) - 9 = -2(2) + 4$$

$$0 = 0 \checkmark$$

$$3(7) - 9 = -2y + 4$$

$$21 - 9 = -2y + 4$$

$$\begin{array}{r} 12 = -2y + 4 \\ -4 \quad -4 \\ \hline \end{array}$$

$$\frac{8}{-2} = \frac{-2y}{-2}$$

$$-4 = y$$

Try a value  
if  $y=2$ ,  $x=3 \checkmark$

If  $x=7$

So  $D(7, -4)$

Slope of  $\overline{CD}$

$$\frac{-4-2}{7-3} = -\frac{6}{4} = -\frac{3}{2}$$

Slope from A to B =  $\frac{2}{3}$   
from C to D is  $-\frac{3}{2}$