

④

$$\sqrt{35}$$



$$\sqrt{36} = 6$$

$$\sqrt{35} < 6$$

$$\frac{20}{3}$$



$$3 \overline{) 20.00} \begin{array}{r} 6.66 \end{array}$$

$$= 6.66$$

$$2.5^2$$



$$6.83$$

2	0.5
2	1
0.5	0.25

$$= 6.25$$

$$\sqrt{35}$$

$$\approx 5.9$$

$$2.5^2$$

$$= 6.25$$

$$\frac{20}{3}$$

$$= 6.\dot{6}$$

$$6.83$$

$$= 6.83$$

(10) Since DCE is perpendicular to AB (at a right angle) then the gradient of DCE will be the **negative reciprocal** of the gradient of AB.

Negative reciprocal: Two numbers are negative reciprocals if they multiply together to make -1.

In practise to find the negative reciprocal just FLIP the FRACTION, FLIP the SIGN.

e.g. $2 \xrightarrow{\text{neg. recip.}} -\frac{1}{2}$ $\frac{1}{2} \xrightarrow{\text{neg. recip.}} -2$

$-2 \xrightarrow{\text{neg. recip.}} \frac{1}{2}$ $-\frac{1}{2} \xrightarrow{\text{neg. recip.}} 2$

$\frac{2}{3} \xrightarrow{\text{neg. recip.}} -\frac{3}{2}$ $-\frac{5}{4} \xrightarrow{\text{neg. recip.}} \frac{4}{5}$

$$\text{Gradient of AB} = \frac{\text{difference in Y co-ords}}{\text{difference in X co-ords}} = \frac{0-8}{4-0} = \frac{-8}{4} = \underline{\underline{-2}}$$

Gradient of DCE is negative reciprocal so $= \frac{1}{2}$

DCE has equation: $y = \frac{1}{2}x + ?$

To find ? we need to know a point on the line DCE so we need to find the co-ordinates of point C.

It's the midpoint of AB so co-ords are

$$\left(\frac{0+4}{2}, \frac{8+0}{2} \right) = \underline{\underline{(2, 4)}}$$

Now we sub in the co-ordinates of point C into our equation for DCE to find ?.

$$4 = \frac{1}{2} \times 2 + ?$$

↑
y co-ord
of C.

↑
x co-ord
of C.

$$\Rightarrow 4 = 1 + ?$$

$$\hookrightarrow 4 - 1 = ?$$

$$\hookrightarrow \underline{\underline{? = 3}}$$

So our equation for DCE is : $y = \frac{1}{2}x + 3$