## Student Activity on Distance

Use in connection with the interactive file "Distance" on the Student's CD.

## To explore how to work out the distance between two points



The slider called "Step" is used to change the information on the screen.

To start set the slider to "Step = 1"

1. With the slider "Step" at 1, write down the distance between the points A and
B. $\qquad$
2. Move "Step" along so it says "2".

Write down the distance between the points $C$ and
D. $\qquad$
3. Move "Step" along so it says " 3 ".

Write down the distance between the points E and F. $\qquad$
4. Move "Step" along so it says "4". By working out the distances $|P Q|$ and $|Q R|$ write down the distance between the points $P$ and $R$. $\qquad$
5. Move "Step" along so it says " 5 ". By working out the distances |UT| and |TS| write down the distance between the points U and S . $\qquad$
6. The distances you've found so far have all been either horizontal distances or vertical distances. Calculating diagonal distances involves using the skills you have just practiced and Pythagoras' Theorem. Move "Step" along so it says " 6 ". Write down the distance between the points A and C . $\qquad$ Write down the distance between the points B and C . $\qquad$

The triangle $A B C$ is a right angled triangle and we have two sides of the right angled triangle. Use Pythagoras' Theorem to calculate $|\mathrm{AB}|$.
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$\qquad$
$\qquad$
$\qquad$
7. Move "Step" along so it says " 7 ".

Write down the distance between the points D and F . $\qquad$

Write down the distance between the points E and F. $\qquad$ The triangle DEF is a right angled triangle and we have two sides of the right angled triangle. Use Pythagoras' Theorem to calculate |DE|
8. Move "Step" along so it says " 8 ". Move the point R so that the triangle PQR is right-angled (and the base of the triangle is horizontal).

Write down |PR| $\qquad$ Write down $|\mathrm{QR}|$ $\qquad$

Calculate the distance |PQ| $\qquad$
$\qquad$
$\qquad$
$\qquad$

