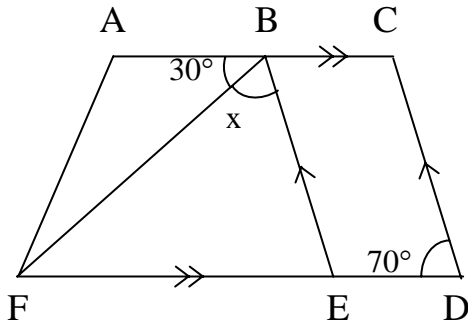


# Key Stage 3 ETV Programme 《Angles and Lines》

## Worksheet

1. Write down the reasons for the respective steps in the following solution :

In the diagram,  $AC \parallel FD$ ,  $BE \parallel CD$ ,  
 $\angle D = 70^\circ$ ,  $\angle ABF = 30^\circ$ ,  
 find the value of  $x$ .

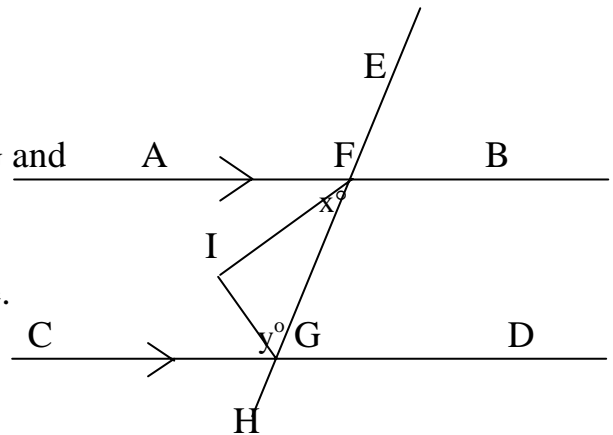


$BE \parallel CD$  ,  
 $\angle BEF = \angle D = 70^\circ$  (\_\_\_\_\_)

$AC \parallel FD$  ,  
 $\angle CBE = \angle BEF = 70^\circ$  (\_\_\_\_\_)

$\angle CBE + x + 30^\circ = 180^\circ$  (\_\_\_\_\_)  
 $x = 80^\circ$

2. In the diagram,  $AB \parallel CD$ ,  
 FI, GI are the angle bisectors of  $\angle AFG$  and  
 $\angle CGF$  respectively.  
 (a) Find the value of  $x + y$ ;  
 (b) hence, prove that  $\angle I$  is a right angle.



3. In the diagram,  $BA \parallel DE$ ,  
 $\angle D = 140^\circ$ ,  $\angle C = 90^\circ$ ,  
 find  $\angle B$ .

