

Question	Answer	Marks	Part marks and guidance	
	<p>b</p> <p>e.g. $DEF = 180 - (43 + 55) = 82$ angles in a triangle $HDF = DEF = 82$ alternate segment theorem</p> <p>OR</p> <p>$GDE = 55$ alternate segment theorem $HDF = 180 - (43+55) = 82$ angles on a straight line</p>	<p>4</p>	<p>M2 for $[DEF =] 180 - (43 + 55)$ soi by $DEF = 82$ and angles in a triangle or M1 for $[DEF =] 180 - (43 + 55)$ soi by $DEF = 82$</p> <p>AND</p> <p>M2 for $HDF = DEF [= 82]$ and alternate segment theorem or M1 for $HDF = DEF [= 82]$</p> <p><u>Alternative method</u> M2 for $GDE = 55$ and alternate segment theorem or M1 for $GDE = 55$</p> <p>AND</p> <p>M2 for $[HDF =] 180 - (43 + 55) [= 82]$ and angles on a straight line or M1 for $[HDF =] 180 - (43 + 55) [= 82]$</p>	<p>Allow full marks if 3 letter angle notation not used provided their angles are unambiguously defined (eg. labelled on the diagram and referred to in working using their labels)</p> <p>Note: $180 - (43 + 55)$ with no other creditable working or reasoning scores M1</p>
<p>17</p>	<p>a</p> <p>(10, 11)</p>	<p>2</p>	<p>B1 for a ray drawn through either point A and (6, 7) or point B and (2, 9)</p>	
	<p>b</p> <p>-2</p>	<p>2</p>	<p>B1 for 2</p>	
	<p>c</p> <p>(4, 1)</p>	<p>2</p>	<p>B1 for (4, k) or (k, 1)</p>	

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