

**Angles Past Paper Answers Edexcel – None Calculator**

1.

Question	Working	Answer	Mark	Notes
7		80	4	<p>B1 for <math>EBF = 50</math> or <math>ABE = 50</math></p> <p>M1 for angles given that can lead to <math>x = 80</math> as the next step                      eg <math>EBF = 50</math> and <math>ABE = 50</math>                      eg <math>EBF = 50</math> and <math>BFG = 100</math>                      eg <math>EBF = 50</math> and <math>BFE = 80</math>                      eg <math>EBF = 50</math> and <math>DEB = 130</math> and <math>ABE = 50</math></p> <p>A1 cao</p> <p>C1 for stating correct reasons appropriate to their method shown</p> <p>eg                      Base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u>.                      with <u>Angles</u> in a <u>triangle</u> add up to <u><math>180^\circ</math></u>                      with <u>Alternate angles</u> are equal</p> <p>eg                      Base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u>.                      with <u>Alternate angles</u> are equal                      with <u>Angles</u> on a <u>straight line</u> add up to <u><math>180^\circ</math></u></p> <p>eg                      Base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u>.                      with <u>The exterior angle</u> of a triangle is <u>equal</u> to the sum of the <u>opposite interior angles</u>.                      with <u>Allied angles</u> / <u>Co-interior angles</u> add up to <u><math>180^\circ</math></u></p>

2.

		88	4	<p>M1 for <math>(APT =) 180 - (32 + 90) (=58)</math>                      M1 for <math>(PTR =) "58"</math>                      M1 for <math>360 - ("58" + 124 + 90)</math>                      A1 cao                      OR (line <math>XY</math> drawn through <math>Q</math> parallel to <math>AB</math>)                      M1 for <math>(QRD =) 180 - 124 (=56)</math>                      M1 for <math>(XQR =) "56"</math>                      M1 for <math>(PQX =) 32</math>                      A1 cao</p>
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3.

Question	Working	Answer	Mark	Notes
	<p>Angle <math>ABE = 40</math> (vertically opposite angles are equal)                      Angle <math>BAE = \text{angle } BEA = (180 - 40)/2 = 70</math>                      (base angles of an isos triangle are equal)  <math>x = 70</math> (alternate angles on parallel lines are equal)</p> <p>OR</p> <p>Angle <math>ABE = 40</math> (vertically opposite angles are equal)                      Angle <math>BAE = \text{angle } BEA = (180 - 40)/2 = 70</math> (base angles of an isosceles triangle are equal)                      Angle <math>BEF = 40</math>                      (corresponding angles are equal)  <math>x = 180 - 70 - 40 = 70</math>                      (angles as a straight line add up to <math>180^\circ</math>)</p>	70	5	<p>B1 for angle <math>ABE = 40</math>, could be marked on the diagram                      M1 for <math>(180 - '40')/2 (= 70)</math>                      A1 for <math>70^\circ</math> identified as the angle <math>x^\circ</math></p> <p>C2 for fully correct reasons:                      'vertically <u>opposite angles</u> are equal' or '<u>vertically opposite angles</u> are equal'                      'base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u>'                      '<u>alternate angles</u> on parallel lines are equal'                      (C1 for just one correct reason quoted)</p> <p>OR</p> <p>B1 for angle <math>ABE = 40</math> or angle <math>BEF = 40</math>, could be marked on the diagram                      M1 for <math>(180 - '40')/2 (= 70)</math>                      A1 for <math>70^\circ</math> identified as the angle <math>x^\circ</math>                      C2 for fully correct reasons:                      'vertically <u>opposite angles</u> are equal' or '<u>vertically opposite angles</u> are equal'                      'base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u>'                      '<u>corresponding angles</u> on parallel lines are equal'                      '<u>angles</u> on a <u>straight line</u> add up to <u>180</u>'                      (C1 for just one correct reason quoted)</p>

4.

Question	Working	Answer	Mark	Notes
	<p><math>BFD = 42^\circ</math>  <math>HFB = 110^\circ</math></p> <p><math>110 - 42</math></p>	68	3	<p>M1 for <math>EDC = 42</math> or <math>DHF = 180 - 110</math>                      M1 for <math>180 - 42 - 70</math>                      A1 cao                      or                      M1 for <math>BFD = 42^\circ</math> or <math>HFB = 110^\circ</math>                      M1 for <math>110 - 42</math>                      A1 cao                      or                      M1 for <math>AFH = 180 - 110 = 70</math>                      M1 for <math>180 - 70 - 42 = 68</math>                      A1 cao</p>

5.

Question	Working	Answer	Mark	Notes	Type
	<p><math>(180 - 120) \div 2 = 30</math>  <math>(180 - 30) \div 2</math></p>	$75^\circ$	4	<p>M1 for method to find angle <math>ADB</math> (or angle <math>ABD</math>) <math>(180 - 120) \div 2</math></p> <p>A1 for 75</p> <p>C1 (dep on M1) for <u>Alternate angles</u> are equal <u>or</u> <u>co-interior</u> (allied) <u>angles</u> add up to <u>180</u></p> <p>C1 (dep on M1) for <u>Base angles</u> of an <u>isosceles</u> triangle are <u>equal</u> <u>and</u> <u>Angles</u> in a <u>triangle</u> add up to <u>180</u></p>	E