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| Year 7 | | *Angle Properties* | Non Calculator  Section |
| **Skills and Knowledge Assessed:**   * Use the language, notation and conventions of geometry. * Recognise the geometric properties of angles at a point. * Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163) * Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164) | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Answer all questions in the spaces provided on this test paper by:  *Writing the answer in the box provided.*  or  *Shading in the bubble for the correct answer from the four choices provided.*  Show any working out on the test paper.Calculators are **not** allowed. | | | |
|  | Use a protractor to measure the angle ABC. | | |
|  | Four angles are marked, around a point *O*.  What is the size of  o | | |
|  | Which pair of angles are **not** adjacent angles? | | |
|  | What is the value of *x*? | | |
|  | Use a protractor to draw | | |
|  | Which of the angles below would be described as a reflex angle? | | |
|  | What is the complement of 65o?    25o 35o 115o 125o | | |
|  | Which line segment is parallel to BD and perpendicular to FG? | | |
|  | Name an angle which is equal to | | |
|  | Maree correctly worked out that  What type of angles allowed her to work this out?  Alternate angles on parallel lines.  Cointerior angles on parallel lines.  Supplementary angles on a straight line.  Vertically opposite angles meeting at a point. | | |
|  | What is the value of *x*?  38o  67o  75o  142o | | |
|  | What is the size of  o | | |
|  | LQ  NS  VY  WX | | |
|  |  | | |
|  | How could you describe the shaded angle? | | |
|  | What is the size of | | |
|  | What is the size of | | |
|  | AB and EF are straight lines.  What is the value of *x*? | | |
|  | What is the value of *y*? | | |
|  | What is the value of *g*? | | |
|  |  | | |

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| Year 7 | | *Angle Properties* | Calculator Allowed  Short Answer  Section |
|  | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Answer all questions in the spaces provided on this test paper by:  *Writing the answer in the box provided.*  or  *Shading in the bubble for the correct answer from the four choices provided.*  Show any working out on this test paper. Calculators are allowed. | | | |
|  | Name an acute angle in the diagram. | | |
|  | Which angle in the shape is a right angle? | | |
|  | Which of the angles in the diagram is obtuse? | | |
|  | Which statement is true? | | |
|  | Which angles are a pair of vertically opposite angles? | | |
|  | What is the size of angle RST?  o | | |
|  | Which is correct? | | |
|  | What is the value of *x*?  *x =* | | |
|  | Which line segment is parallel to BC and perpendicular to GC?  AB  AD  DC  FE | | |
|  | Three roads going to B, C and D, start from an intersection I.  The roads going to D and C meet at right angles.  The road going to B makes equal angles with the roads going to D and C.  What is the size of the angle BIC? | | |
|  | The lines *AB* and *EF* are parallel.  Which is true? | | |
|  | Find the value of *m*. | | |
|  | Three rafters join as shown in the diagram.  What is the value of *r*? | | |
|  | Which lines are parallel?  AB and CD  AB and HG  CD and FG  FE and HG | | |
|  | What is the value of *d*? | | |
|  |  | | |
|  | What is the value of | | |
|  | What is the value of *t* ? | | |
|  | What is the value of *x*? | | |
|  |  | | |
|  | What is the size of | | |

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| Year 7 | | *Angle Properties* | Non Calculator  Section |
| ANSWERS | | | |
| No. | WORKING | | ANSWER |
|  | Using protractor angle = 67o | | 67o (allow 2o either side) |
|  |  | | 111o |
|  |  | | 2nd Answer |
|  | The two angles are alternate on parallel lines so are equal. | | 135 |
|  |  | | |
|  | Reflex is between 180o and 360o, so | | 3rd Answer |
|  | Compliment adds to form right angle so =90 – 65 = 25o | | 1st Answer |
|  | CE is parallel to BD and perpendicular to FG | | Any of CE, EC, FC or FE |
|  |  | |  |
|  |  | | 3rd Answer |
|  |  | | 1st answer |
|  |  | |  |
|  | Need either equal corresponding angles or supplementary cointerior angles. NS gives both as 110 + 70 = 180 | | 2nd answer |
|  |  | | 50 |
|  |  | | 3rd Answer |
|  |  | | 35o |
|  |  | | 40o |
|  | AB and EF form vertically opposite angles which are equal. | | 4th Answer |
|  |  | | 2nd Answer |
|  | Different working is possible. | | 75o |
|  |  | | 4th Answer |

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| Year 7 | | *Angle Properties* | Calculator Allowed  Short Answer  Section | |
| ANSWERS | | | | |
| No. | WORKING | | | ANSWER |
|  |  | | | 2nd Answer |
|  | is a right angle | | | 1st Answer |
|  |  | | | 4th Answer |
|  | (add to 180o) | | | 3rd Answer |
|  | are vertically opposite angles. | | | 3rd Answer |
|  |  | | | 108o |
|  | since | | | 4th Answer |
|  |  | | |  |
|  | AD is parallel to BC and perpendicular to GC | | | 2nd Answer |
|  |  | | | 135o |
|  | *x*= 107 (alternate angles ) *y* = 73 (cointerior angles) | | | 2nd Answer |
|  |  | | | 102 |
|  |  | | | 2nd Answer |
|  | All pairs of cointerior angles.  The pairs between AB and CD are supplementary, so they are parallel. | | | 1st Answer |
|  |  | | | 2nd Answer |
|  | Need either equal alternate angles or supplementary cointerior angles. OT gives the latter as 95 + 85 = 180 | | | OT |
|  | Can do by angle sum triangle if they have learnt it. | | | 29o |
|  |  | | | 33o |
|  |  | | | 85o |
|  |  | | | 2nd Answer |
|  |  | | | 4th Answer |