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| *School Name*  *Mathematics Test 2017* | | | |
| 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 in this section.  **A protractor and ruler are needed for this test.** | | | |
|  | Use a protractor to help draw and label an angle *STU*, which measures 38o. | | |
|  | What is the value of | | |
|  | Name one of the angles which is adjacent to | | |
|  | What is the value of *x*? | | |
|  | Use a protractor measure | | |
|  | Which is true? | | |
|  | What is the supplement of 85o?    5o 85o 95o 105o | | |
|  | Name a pair of perpendicular lines in the diagram.    and | | |
|  | Use a protractor to help draw and label an angle *LMK*, which measures 138o. | | |
|  | Which is a pair of equal angles in the diagram below. | | |
|  | Which reason could be used to determine the value of *w*?    Equal alternate angles on parallel lines.  Equal corresponding angles on parallel lines.  Supplementary alternate angles on parallel lines.  Supplementary cointerior angles on parallel lines. | | |
|  | What is the value of *u*? | | |
|  | What is the size of | | |
|  | Which is **not** a pair of supplementary angles on the parallel lines shown? | | |
|  | How could you describe the shaded angle? | | |
|  |  | | |
|  | What is the size of | | |
|  | What is the value of *p*? | | |
|  | What is the value of  ? | | |
|  | What is an expression for the shaded angle? | | |

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|  | | | 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. | | | |
|  | Which best describes the types of angles around point *O*.    There are two acute angles, a right angle and an obtuse angle.  There are two acute angles, an obtuse angle and a reflex angle.  There are two right angles, an acute angle and an obtuse angle.  There are two right angles, an obtuse angle and a reflex angle. | | |
|  | What name could be used to describe the shaded angle? | | |
|  | Which of these angles is a reflex angle? | | |
|  | Which statement is true? | | |
|  | Which is true? | | |
|  | What is the value of | | |
|  | Which side is parallel to *ED* and perpendicular to *BC*?    *AB*  AE  CD  DA | | |
|  | What is the value of *z*? | | |
|  | Which angle forms a pair of equal alternate angles with angle ? | | |
|  | Find the value of *s*. | | |
|  | The Holiday Hotel is a rectangular building on the corner of Breeze Boulevarde and Ocean Street.  What is the size the angle marked ? | | |
|  | What is the value of *g*? | | |
|  | What is the value of *q*? | | |
|  | Which lines are parallel?  *AB* and *CD*  *FE* and *IJ*  *FE* and *HG*  *IJ* and *HG* | | |
|  | What is the value of y? | | |
|  | AB || CD and  What is the size of | | |
|  | Write an expression for the size of  in terms of *x*. | | |
|  | What is the value of *p*? | | |
|  | *RS* is parallel to *YX*.  Name an interval which is perpendicular to *PQ*. | | |
|  | What is the value of *x* ? | | |

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ANSWERS

| Question | Working and Answer | |
| --- | --- | --- |
|  | Accurately drawn and labelled ngle | |
|  |  | |
|  |  | |
|  |  | |
|  | Allow one degree either way. | |
|  | Only the first statement is correct  **1st Answer** | |
|  |  | |
|  | *HE* and *EF*  or *HE* and *HD* | |
|  | Allow one degree either way. | |
|  | **3rd Answer** | |
|  | Supplementary cointerior angles on parallel lines  **4th Answer** | |
|  | **2nd Answer** | |
|  | **116o** | |
|  | 1st Answer | |
|  | **3rd Answer** | |
|  |  | |
|  |  | |
|  | **2nd Answer** | |
|  | Different methods are possible (2 shown). |  |
|  | **3rd Answer** | |

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| Year 7 | *Angle Properties* | Calculator Allowed  Short Answer  Section |

ANSWERS

|  |  |
| --- | --- |
| Question | Working and Answer |
|  | **3rd Answer** |
|  | is the shaded angle  **4th Answer** |
|  | **1st Answer** |
|  | **2nd Answer** |
|  | **2nd Answer** |
|  |  |
|  | **1st Answer** |
|  |  |
|  | **1st Answer** |
|  |  |
|  | **3rd Answer** |
|  | **2nd Answer** |
|  |  |
|  | Between FE and HG there are a pair of cointerior angles that are supplementary (88o and 92o) so they are parallel.  **3rd Answer** |
|  | **2nd Answer** |
|  | **3rd Answer** |
|  |  |
|  |  |
|  | Resolving all of the angles around the segment PQ gives the diagram above.    So the line perpendicular to PQ is **TP.** |
|  |  |