

FORM SEA/ 2010

MARCH 2010

CARIBBEAN EXAMINATIONS COUNCIL

TRINIDAD AND TOBAGO

SECONDARY ENTRANCE ASSESSMENT

MATHEMATICS

75 minutes

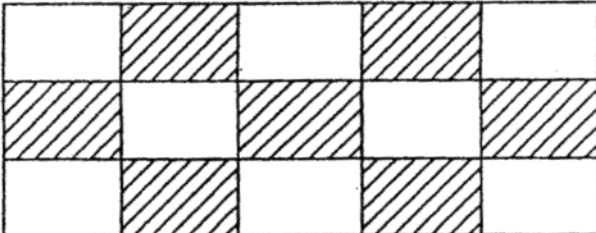
<p>PRIMARY SCHOOL: _____</p> <p>_____</p> <p>_____</p> <p>CENTRE NUMBER: _____</p>
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READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

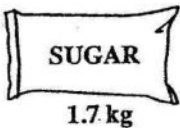

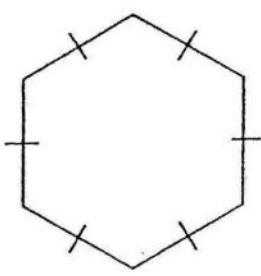
1. This test is divided into THREE sections.
2. Make sure that you understand the directions before you start to work on any section.
3. Write ALL your answers in this test booklet. Show ALL your working in the working column.
4. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

SECTION I

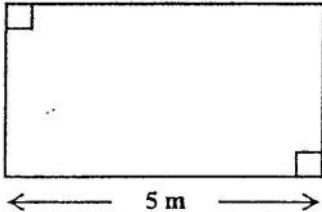
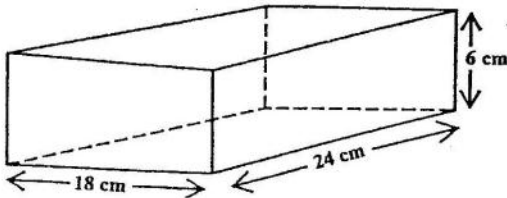
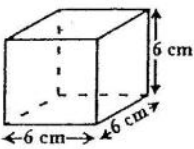
Each question is worth 1 mark. Answer ALL questions.
Show ALL working in the working column.

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here.								
			KC	AT	PS						
1.	<p>Write in figures:</p> <p>One million, two thousand and three</p> <p>Answer _____</p>										
2.	<p>Express the SHADED PART as a COMMON FRACTION of the whole shape.</p>  <p>Answer _____</p>										
3.	<p>Complete the table below.</p> <table border="1" data-bbox="349 1501 812 1732"> <thead> <tr> <th>Common Fraction</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td></td> <td>15%</td> </tr> <tr> <td>$\frac{3}{5}$</td> <td>60%</td> </tr> </tbody> </table>	Common Fraction	Percentage		15%	$\frac{3}{5}$	60%				
Common Fraction	Percentage										
	15%										
$\frac{3}{5}$	60%										

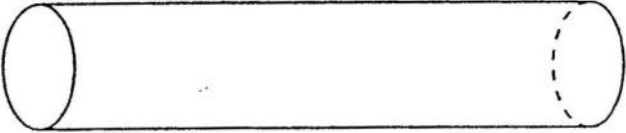
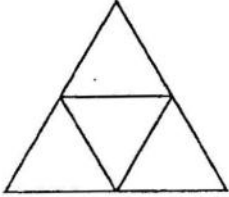
No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
4.	<p>What number, N, should go in the circle to make the operation CORRECT?</p> <div style="text-align: center;"> <pre> graph TD N((N)) --> A[Subtract 8] A --> B[Divide by 4] B --> C[8] </pre> </div> <p>Answer N = _____</p>				
5.	<p>Write in the box the number that CORRECTLY completes the number sentence.</p> $\frac{2}{3} = \frac{\square}{12}$				
6.	<p>At the market, a mother bought some fruits: 3 oranges, 4 pears and 5 mangoes. What FRACTION of the fruits was pears?</p> <p>Answer _____</p>				
7.	<p>Ken eats 4 plums each day. How many plums would he eat in TWO weeks?</p> <p>Answer _____</p>				

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
8.	<p>At a school bazaar, every seventh student who entered in the first hour was admitted free.</p> <p>If 46 students entered in the first hour, how many of them entered free?</p> <p>Answer _____</p>				
9.	<p>Which of the two sacks has the SMALLER mass?</p> <div style="display: flex; justify-content: center; align-items: center; gap: 50px;"> <div style="text-align: center;">  <p>SUGAR 1.7 kg</p> </div> <div style="text-align: center;">  <p>FLOUR 1690 g</p> </div> </div> <p>Answer _____</p>				
10.	<p>A ball is bought for \$35.00 and sold for \$48.00. Calculate the profit made in dollars.</p> <p>Answer \$ _____</p>				
11.	<p>A garden has the shape shown below with all its sides of equal length. The perimeter is 72 metres.</p> <div style="text-align: center;">  </div> <p>What is the length of ONE side of the garden?</p> <p>Answer _____ metres</p>				

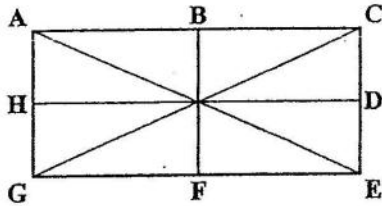
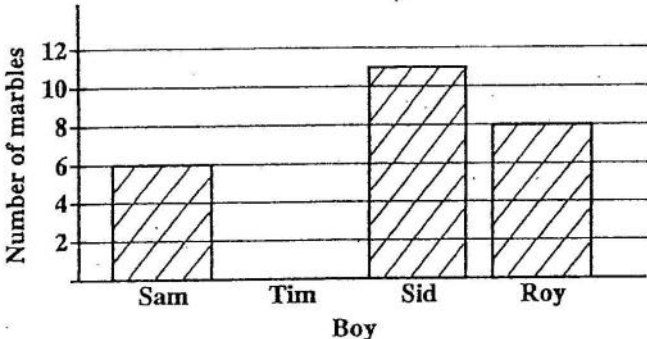
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No	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
12.	<p>Sally began reading a book at 8:17 p.m. She took a break after reading for half of an hour. At what time did she take a break?</p> <p>Answer _____ p.m.</p>				
13.	<p>A rectangular garden bed is 5 metres long and has an area of 18 square metres.</p>  <p>How wide is the garden bed?</p> <p>Answer _____ metres (m)</p>				
14.	<p>A rectangular box is 18 cm wide, 24 cm long and 6 cm deep.</p>  <p>How many cubes with edges of 6 cm will completely fill the box?</p>  <p>Answer _____ cubes</p>				

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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
15.	<p>Jessica bought a blouse for \$80.00 and sold it for \$60.00.</p> <p>Calculate the percentage loss on the sale.</p> <p>Answer _____</p>				
16.	<p>A picture of a solid is shown below.</p>  <p>What is the name of the solid?</p> <p>Answer _____</p>				
17.	<p>A net of a solid is shown below.</p>  <p>What is the name of the solid formed when the net is folded?</p> <p>Answer _____</p>				

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No.	TEST ITEMS	WORKING COLUMN	<i>Do Not Write Here</i>		
			KC	AT	PS
18.	<p>The diagram below is a rectangle. The points B, D, F and H are midpoints of its sides.</p>  <p>Name ONE line of symmetry of the rectangle.</p> <p>Answer _____</p>				
19.	<p>The incomplete bar graph shows the number of marbles owned by 3 of 4 boys in a club.</p>  <p>Together the 4 boys owned 30 marbles. How many marbles did Tim own?</p> <p>Answer _____ marbles</p>				
20.	<p>A bowler obtained the following number of wickets in 9 matches:</p> <p>3, 1, 4, 6, 4, 2, 4, 1, 3</p> <p>What is the MODAL number of wickets?</p> <p>Answer _____</p>				

SECTION II

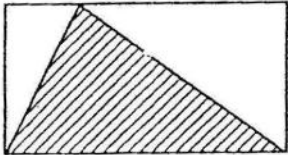
Each question is worth either 2 or 3 marks. Answer ALL questions.
Show ALL working in the working column.

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here										
			KC	AT	PS								
21.	<p>There are 60 donuts in a glass case. Eighteen of them are chocolate coated. What percentage of donuts is NOT chocolate coated?</p> <p>Answer _____ (2 marks)</p>												
22.	<p>If 75% of a class of 32 students are present, how many students are absent from the class?</p> <p>Answer _____ (2 marks)</p>												
23.	<p>Three mixed numbers from the set given below will produce a WHOLE number when added.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">$3\frac{1}{2}$</td> <td style="text-align: center;">$1\frac{1}{8}$</td> <td style="text-align: center;">$2\frac{7}{12}$</td> <td style="text-align: center;">$4\frac{3}{8}$</td> </tr> </table> <p>What are the THREE numbers?</p> <p>Answer _____ (2 marks)</p>	$3\frac{1}{2}$	$1\frac{1}{8}$	$2\frac{7}{12}$	$4\frac{3}{8}$								
$3\frac{1}{2}$	$1\frac{1}{8}$	$2\frac{7}{12}$	$4\frac{3}{8}$										
24.	<p>The same pattern is followed throughout in the sequence below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">5</td> <td style="text-align: center;">8</td> <td style="text-align: center;">13</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> <p>What are the next TWO numbers in the sequence?</p> <p>Answer _____ (2 marks)</p>	1	2	3	5	8	13						
1	2	3	5	8	13								




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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
25.	<p>Sammy planted 526 heads of lettuce. Don planted 98 more than Sammy and 49 more than Linda.</p> <p>(a) How many heads of lettuce did Don plant?</p> <p style="text-align: right;">Answer _____ (1 mark)</p> <p>(b) How many heads of lettuce did Linda plant?</p> <p style="text-align: right;">Answer _____ (1 mark)</p> <p>(c) Calculate the number of heads of lettuce planted ALTOGETHER.</p> <p style="text-align: right;">Answer _____ (1 mark)</p>				
26.	<p>A school received 25 boxes of pencils. Each box contained 36 pencils. The pencils were distributed EQUALLY among 9 classes. How many pencils did EACH class receive?</p> <p style="text-align: right;">Answer _____ (3 marks)</p>				
27.	<p>Calculate:</p> $7\frac{2}{5} - 2\frac{1}{4}$ <p style="text-align: right;">Answer _____ (3 marks)</p>				


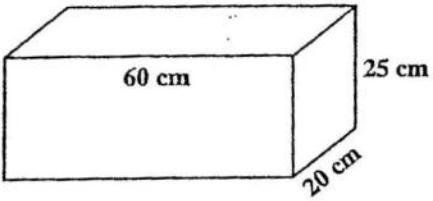
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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here										
			KC	AT	PS								
28.	<p>The table below shows the number of marks awarded for EACH correct answer in Sections A, B and C of a test.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Section</th> <th>Number of Marks for Each Correct Answer</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>1 mark</td> </tr> <tr> <td>B</td> <td>3 marks</td> </tr> <tr> <td>C</td> <td>5 marks</td> </tr> </tbody> </table> <p>Jessica got 16 items correct in Section A and 8 items correct in Section B.</p> <p>How many items must Jessica get correct in Section C to earn a score of 50 on the test?</p> <p>Answer _____ (3 marks)</p>	Section	Number of Marks for Each Correct Answer	A	1 mark	B	3 marks	C	5 marks				
Section	Number of Marks for Each Correct Answer												
A	1 mark												
B	3 marks												
C	5 marks												
29.	<p>A discount of 15% was given for each cash purchase at a shoe store. How much will Derrick pay cash for a pair of shoes marked at \$600.00?</p> <p>Answer _____ (2 marks)</p>												
30.	<p>In the diagram below, the area of the shaded triangle is 36 cm^2.</p>  <p>What is the area of the rectangle?</p> <p>Answer _____ (2 marks)</p>												

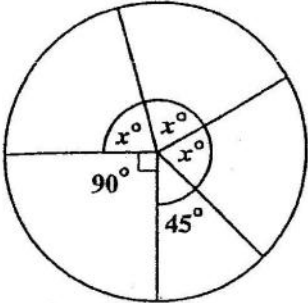
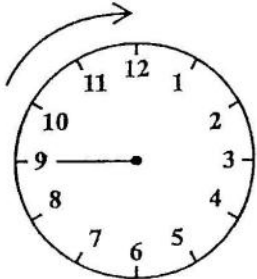
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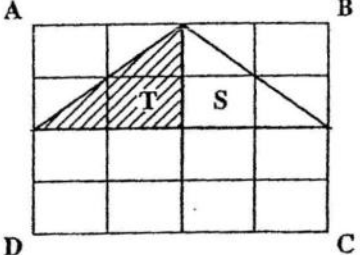
No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
31.	<p>The diagram below shows the distances that David covered in a triathlon.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Name: <u>David</u></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  600 metres </div> <div style="text-align: center;">  6.5 kilometres </div> <div style="text-align: center;">  8 kilometres </div> </div> </div> <p>How many kilometres did David cover during the entire event?</p> <p style="text-align: right;">Answer _____ kilometres (2 marks)</p>				
32.	<p>Tony borrowed \$12 000 from a bank at a rate of 8% per annum.</p> <p>(a) Calculate the simple interest if he agreed to repay the loan in 2 years.</p> <p style="text-align: right;">Answer _____</p> <p>(b) How much will Tony have to repay the bank?</p> <p style="text-align: right;">Answer _____ (3 marks)</p>				
33.	<p>Michael left home at 7:37 a.m. and arrived at school 43 minutes later. He reached school 5 minutes before the bell rang. At what time did the bell ring?</p> <p style="text-align: right;">Answer _____ (3 marks)</p>				

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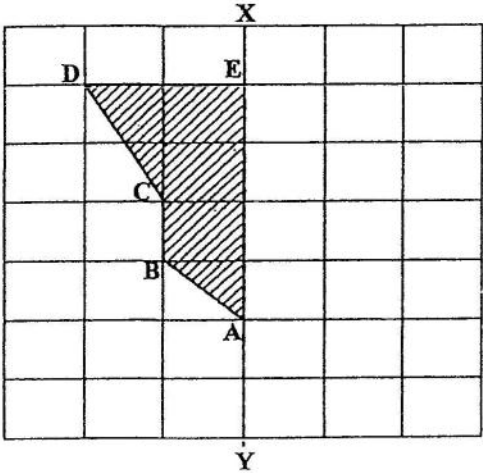
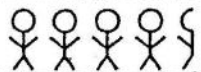
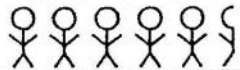


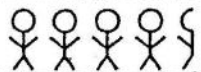
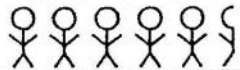

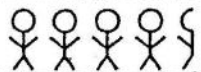
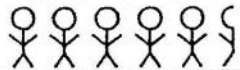

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
34.	<p>Mr. Ben has to be at work at 9:00 a.m. He must get dressed, eat and walk to work. After getting out of bed, it takes him 15 minutes to get dressed, then 20 minutes to eat, and a further 35 minutes to walk to work.</p> <p>(a) How long does it take Mr. Ben to get dressed, eat and walk to work?</p> <p>Answer _____ (1 mark)</p> <p>(b) What is the LATEST time Mr. Ben should get out of bed in order to get to work on time?</p> <p>Answer _____ (2 marks)</p>				
35.	<p>The container shown below is used to fill the fish tank next to it.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Container</p> </div> <div style="text-align: center;">  <p>Fish Tank</p> </div> </div> <p>(a) What is the volume, in LITRES, of the fish tank? (1000 cm³ = 1 litre)</p> <p>Answer _____ litres (2 marks)</p> <p>(b) How many full containers are needed to fill the tank completely?</p> <p>Answer _____ (1 mark)</p>				

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No.	TEST ITEMS	WORKING COLUMN	<i>Do Not Write Here</i>		
36.	<p>The three angles labelled x° in the diagram below are equal in size.</p>  <p>Calculate the value of x.</p> <p>Answer _____ (2 marks)</p>		KC	AT	PS
37.	<p>The minute hand of a clock moved from 9 to 2 in the direction of the arrow shown.</p>  <p>Through how many degrees did the minute hand move?</p> <p>Answer _____ (2 marks)</p>				

No.	TEST ITEMS	WORKING COLUMN	<i>Do Not Write Here</i>		
			KC	AT	PS
38.	<p>The shaded triangle T below was moved to the position of triangle S.</p>  <p>(a) Name the movement.</p> <p>Answer _____ (1 mark)</p> <p>(b) How many shaded triangles EXACTLY like T would completely cover the rectangle ABCD?</p> <p>Answer _____ (1 mark)</p> <p>(c) Circle the term from the list below which BEST describes the triangle formed when T and S are combined as shown above.</p> <p>Right-angled Isosceles Equilateral</p> <p>(1 mark)</p>				

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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here								
			KC	AT	PS						
39.	<p>The diagram below shows an incomplete shape.</p>  <p>Complete the shape so that XY is a line of symmetry. (3 marks)</p>										
40.	<p>The pictograph shows the first choice of sports for boys in Standard 5.</p> <table border="1" data-bbox="272 1226 734 1467"> <tr> <td>Volleyball</td> <td></td> </tr> <tr> <td>Football</td> <td></td> </tr> <tr> <td>Cricket</td> <td></td> </tr> </table> <p> = 10 boys</p> <p>How many boys indicated their choice of sports?</p> <p>Answer _____ (2 marks)</p>	Volleyball		Football		Cricket					
Volleyball											
Football											
Cricket											

SECTION III

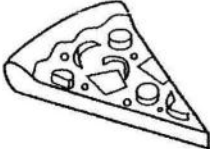


Each question is worth 5 marks. Answer ALL questions.
Show ALL working in the working column.

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
41.	<p>At a school fair, 30% of the pies sold had cheese filling, 25% had beef filling and the remaining 90 pies had potato filling.</p> <p>(a) What percentage of pies had potato filling?</p> <p style="text-align: right;">Answer _____ (1 mark)</p> <p>(b) How many pies were sold at the fair?</p> <p style="text-align: right;">Answer _____ (2 marks)</p> <p>(c) How many MORE cheese pies than beef pies were sold at the fair?</p> <p style="text-align: right;">Answer _____ (2 marks)</p>				

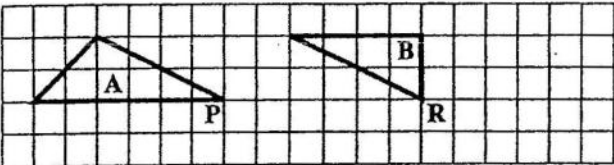
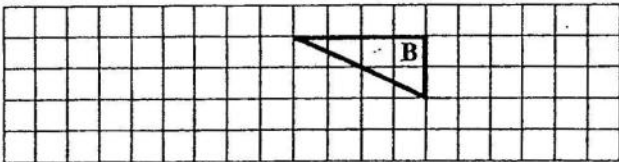
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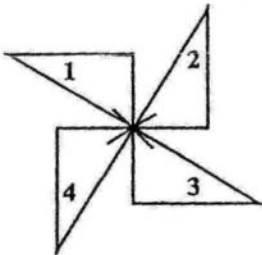
No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
42.	<p>The pupils in Standard Five are seated on benches which can seat either 4 pupils (four-seaters) or 3 pupils (three-seaters). Five four-seaters and fifteen three-seaters are available.</p> <p>(a) What is the LARGEST number of pupils that can be seated if ONLY the four-seaters are used?</p> <p>Answer _____ (1 mark)</p> <p>(b) On Tuesday, 38 pupils are to be seated and ALL the four-seaters MUST be used. What is the SMALLEST number of three-seaters that are needed?</p> <p>Answer _____ (2 marks)</p> <p>(c) On Thursday, 48 pupils are to be seated. How many of EACH type of benches are needed so that ALL seats are occupied and BOTH types of benches are used?</p> <p>Answer _____ four-seaters _____ three-seaters (2 marks)</p>				
43.	<p>Daniel is making tickets for his drama club from sheets of bristol board measuring 60 cm by 45 cm.</p> <p>(a) Calculate the area of ONE sheet of bristol board.</p> <p>Answer _____ cm^2 (1 mark)</p> <p>(b) What is the LARGEST number of tickets measuring 9 cm by 3 cm that Daniel can make from ONE sheet of bristol board?</p> <p>Answer _____ (2 marks)</p> <p>(c) " A ticket cost \$10.00. Daniel collected \$5000.00 when all the tickets were sold. How many sheets of bristol board did he use?</p> <p>Answer _____ (2 marks)</p>				

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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here													
			KC	AT	PS											
44.	<p>The diagrams below show the cost of a slice of pizza, a scoop of ice cream and a drink.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>\$8.00 per slice</p> </div> <div style="text-align: center;">  <p>\$5.00 per scoop</p> </div> <div style="text-align: center;">  <p>\$4.00</p> </div> </div> <p>(a) Mark has 3 slices of pizza, 1 drink and 2 scoops of ice cream. Calculate the cost of his meal.</p> <p style="text-align: right;">Answer \$ _____ (2 marks)</p> <p>(b) Sandy wishes to get exactly \$20.00 in change from a \$50.00 note after purchasing a meal. Suggest a possible combination of the THREE items that she can buy.</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">_____</td> <td>slice(s) of pizza</td> <td style="text-align: right;">\$</td> </tr> <tr> <td style="text-align: right;">_____</td> <td>scoop(s) of ice cream</td> <td style="text-align: right;">\$</td> </tr> <tr> <td style="text-align: right;">_____</td> <td>drink(s)</td> <td style="text-align: right;">\$</td> </tr> <tr> <td style="text-align: right;">Total</td> <td></td> <td style="text-align: right;">\$ _____</td> </tr> </table> <p style="text-align: right;">(3 marks)</p>	_____	slice(s) of pizza	\$	_____	scoop(s) of ice cream	\$	_____	drink(s)	\$	Total		\$ _____			
_____	slice(s) of pizza	\$														
_____	scoop(s) of ice cream	\$														
_____	drink(s)	\$														
Total		\$ _____														

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No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here		
			KC	AT	PS
45.	<p>On the grid below are 2 triangles labelled A and B.</p>  <p>Triangle A slides to the right until the corner at P touches the corner R.</p> <p>(a) How many units did triangle A slide?</p> <p>Answer _____ (1 mark)</p> <p>(b) Draw the combined shape on the new grid. Triangle B is drawn in position for you.</p>  <p>(2 marks)</p> <p>(c) What is the name given to the combined shape of the two triangles?</p> <p>Answer _____ (1 mark)</p> <p>(d) How many right angles are there in the combined shape?</p> <p>Answer _____ (1 mark)</p>				

No.	TEST ITEMS	WORKING COLUMN	Do Not Write Here																					
			KC	AT	PS																			
46.	<p>Jeff is playing a game in which he scores points by spinning a pinwheel similar to the one shown below. It is possible to score 1, 2, 3 or 4 points.</p>  <p>Jeff spins the pinwheel twenty times and records his scores in the tally chart below. The tally chart is incomplete.</p> <table border="1" data-bbox="251 892 917 1144"> <thead> <tr> <th>Points Scored</th> <th>Tally</th> <th>Frequency</th> <th>Total Points</th> </tr> </thead> <tbody> <tr> <td>1</td> <td> </td> <td>1</td> <td>1</td> </tr> <tr> <td>2</td> <td></td> <td>14</td> <td>14</td> </tr> <tr> <td>3</td> <td> </td> <td>3</td> <td>9</td> </tr> <tr> <td>4</td> <td></td> <td>9</td> <td>36</td> </tr> </tbody> </table> <p>(a) Complete the tally chart above by filling in the missing information. (2 marks)</p> <p>(b) What is the modal points scored? Answer _____ (1 mark)</p> <p>(c) How many points did Jeff score for the twenty spins? Answer _____ (1 mark)</p> <p>(d) Calculate the mean number of points Jeff scored for the twenty spins. Answer _____ (1 mark)</p>	Points Scored	Tally	Frequency	Total Points	1		1	1	2		14	14	3		3	9	4		9	36			
Points Scored	Tally	Frequency	Total Points																					
1		1	1																					
2		14	14																					
3		3	9																					
4		9	36																					

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.