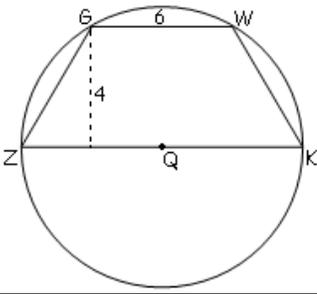


**Mount Rainier Math Invitational
Sixth Grade - January 23, 2009
Team Geometry Test**

Put all answers on the colored answer sheet. All fraction answers must be reduced. Leave answers in terms of π .

Problems 1 through 5 are worth 2 points each	
1	What is the y-intercept of the line that goes through the points (6,5) and (-3,2)? Use (a,b) notation.
2	What is the perimeter of a regular hexagon with side length 7?
3	There is a tap dancing dolphin on my shoulder. He hops off and tap dances along the perimeter of my rectangular rug. My rug is 6' x 10' and the tap dancing dolphin dances at a constant rate of 60 steps per 4 feet. How many steps does the dolphin take?
4	What is the surface area of a cube with a side length of 6?
5	If Circle Q has an area of 25π , what is the area of the trapezoid GWKZ? 
Problems 6 through 10 are worth 3 points each	
6	I have six sticks. They have lengths of 1, 2, 3, 4, 5, and 6. How many distinct triangles can I form? I can reuse the sticks to make a different triangle.
7	Stacey is baking cookies. She gives the cookie dough she doesn't use to Bertha for her to eat. If she has a rectangular sheet of cookie dough that is 4 feet by 8 feet and uses a circular cookies cutter of radius one foot, how much, in square feet, of the cookie dough does Bertha eat?
8	Kelsey the caveman is decorating her cave. She begins to draw a gigantic ice cream cone, using an isosceles triangle with side lengths 10, 10 and 12 and a semi circle of diameter 12. What is the area of her drawing?
9	What is the sum of the interior angles of a nonagon?
10	What is the area of an isosceles right triangle with a hypotenuse of 7?

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School Name: KEY

Team #: KEY

Problems 1-5		2 pts each	
1	(0,3)		
2	42		
3	480		
4	216 (units ²)		
5	32 (units ²)		
Subtotal			

Problems 6-10		3 pts each	
6	7		
7	$32 - 8\pi$ (sq.feet)		
8	$48 + 18\pi$ (units ²)		
9	1260(°)		
10	$\frac{49}{4}$ (units ²)		
Subtotal			

TOTAL		
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