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*University of North Georgia  
Mathematics Tournament  
April 7, 2018*

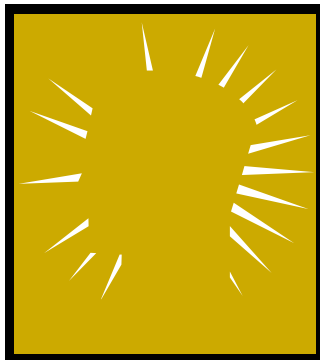
Each bag to be loaded onto a plane weighs either 12, 18 or 22 lb. If the plane is carrying exactly 1000 lb. of lu



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Suppose there is a 40% chance of getting freezing rain, a 10% chance of getting snow and freezing rain, and an 80% chance of getting snow or freezing rain. Find the chance of getting snow.



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Distinct points  $A$ ,  $B$ ,  $C$ , and  $D$  lie on the circle  $x^2 + y^2 = 25$  and have integer coordinates. The distances  $AB$  and  $CD$  are irrational numbers.

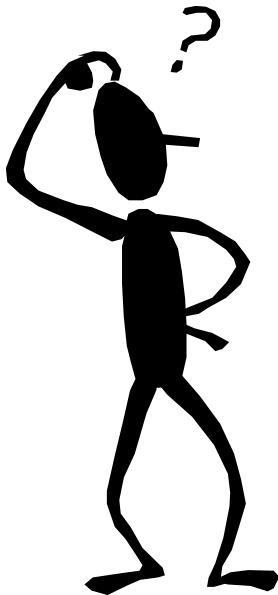
What is the greatest possible value of the ratio  $\frac{AB}{CD}$ ?

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If the 3<sup>rd</sup> and 12<sup>th</sup> terms of an arithmetic sequence are -7 and 56, respectively, then 28 is which term of the sequence?

