#1 Geometry – Hustle National MA© 2008

Find the lateral area of a right circular cone if its base has an area of 25π and its volume is 100π .

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Answer	:					Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

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Answer	:					Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#2 Geometry – Hustle National MA© 2008

Find the length of the tangent segment from (3,7) to the circle $(x+4)^2 + (y-1)^2 = 25.$ #2 Geometry – Hustle National MA© 2008

Find the length of the tangent segment from (3,7) to the circle $(x+4)^2 + (y-1)^2 = 25.$

Answer	:					Answe	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

#2 Geometry – Hustle National MA© 2008

Find the length of the tangent segment from (3,7) to the circle

 $(x+4)^2 + (y-1)^2 = 25.$

#2 Geometry – Hustle National MAO 2008

Find the length of the tangent segment from (3,7) to the circle $(x+4)^2 + (y-1)^2 = 25.$

Answer	:						Answer	:				
Round	1	2	3	4	5		Round	1	2	3	4	5

#3 Geometry – Hustle National MAO 2008

Find the length of one of the shorter diagonals in a regular hexagon with side length 8.

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Answer	:					Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

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Answer	:					Answei	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#4 Geometry – Hustle National MAΘ 2008

A line through the points (3,1) and (5,a) has a positive slope and makes a 60° angle with the *x*-axis. Find the value of *a*.

#4 Geometry – Hustle National MA© 2008

A line through the points (3,1) and (5,a) has a positive slope and makes a 60° angle with the *x*-axis. Find the value of *a*.

Answer	:					Answei	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

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Answer	:					Answe	r:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#5 Geometry – Hustle National MAΘ 2008

One side of an equilateral triangle is 10 cm longer than a side of a smaller equilateral triangle. The sum of the perimeters of the triangles is 186 cm. How long is each side of the larger triangle in centimeters? #5 Geometry – Hustle National MAΘ 2008

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Answer	:						

Round 1 2 3 4 5

Answer : _____

Round 1 2 3 4 5

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5

Answer	:					Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	

#6 Geometry – Hustle National MA© 2008

The surface area of a cardboard box with rectangular sides and a square base is 2800. If the box has a height of 25, what is the volume of the box? #6 Geometry – Hustle National MA© 2008

The surface area of a cardboard box with rectangular sides and a square base is 2800. If the box has a height of 25, what is the volume of the box?

Answer	:											A	Ans	we	r:				 	
Round	1	2	3	4	5							ŀ	Rou	nd		1	2	3	4	5

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Answer	:					Answei	·:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#7 Geometry – Hustle National ΜΑΘ 2008

Find the area of a square that is inscribed in a circle that has a radius of 4. #7 Geometry – Hustle National MAΘ 2008

Find the area of a square that is inscribed in a circle that has a radius of 4.

Answer	:					Answei	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#7 Geometry – Hustle National MA© 2008

Find the area of a square that is inscribed in a circle that has a radius of 4. #7 Geometry – Hustle National MAO 2008

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Answer :						Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#8 Geometry – Hustle National MA© 2008

 ΔABC is a right triangle with hypotenuse \overline{BC} . If D and E are midpoints of sides \overline{AC} and \overline{BC} , respectively, and $m \angle B = 30$ and AC = 20, find the perimeter of ΔCDE .

#8 Geometry – Hustle National MA© 2008

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Answer	:					Answei	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

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Answer :						Answe	r:			<u> </u>	
Round	1	2	3	4	5	Round	1	2	3	4	5

#9 Geometry – Hustle National MAO 2008

Determine the exact perimeter of the triangle with vertices A(6,4), B(-3,1), C(9,-5).

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Answer :						Answe	Answer :							
Round	1	2	3	4	5	Round	1	2	3	4	5			

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Answer :						Answei	::_				
Round	1	2	3	4	5	Round	1	2	3	4	5

#10 Geometry – Hustle National MA© 2008

Trapezoid ABCD has $AB \parallel CD$ with ABbeing the longer base and with CD = 12, AD = 10, CB = 17, the length of the altitude is 8. Find the area of the trapezoid. #10 Geometry – Hustle National MA© 2008

Trapezoid ABCD has $AB \parallel CD$ with ABbeing the longer base and with CD = 12, AD = 10, CB = 17, the length of the altitude is 8. Find the area of the trapezoid.

Answer :						Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

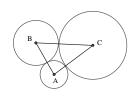
#10 Geometry – Hustle National MA© 2008

Trapezoid ABCD has $\overline{AB} \parallel \overline{CD}$ with \overline{AB} being the longer base and with CD = 12, AD = 10, CB = 17, the length of the altitude is 8. Find the area of the trapezoid. #10 Geometry – Hustle National MAO 2008

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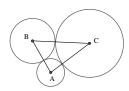
Answer :						Answe	r:_				
Round	1	2	3	4	5	Round	1	2	3	4	5

#11 Geometry – Hustle National MA© 2008



Each of the circles with centers A, B, and C is tangent to the other two. If AB = 10, AC = 14, BC = 18, find the radius of circle A.

#11 Geometry – Hustle National MAO 2008



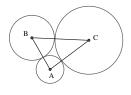
Each of the circles with centers A, B, and C is tangent to the other two. If AB = 10, AC = 14, BC = 18, find the radius of circle A.

Answer :	Answer : _

Round 1 2 3 4 5

Round 1 2 3 4 5

#11 Geometry – Hustle National MAO 2008



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Each of the circles with centers A, B, and C is tangent to the other two. If AB = 10, AC = 14, BC = 18, find the radius of circle A.

Answer	:	
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Answer : _____

Round 1 2 3 4 5

#12 Geometry – Hustle National MA© 2008

In $\triangle ABC, \angle C$ is a right angle, AC = 8, and the length of the median to the hypotenuse is 6. Find the length of \overline{CB} . #12 Geometry – Hustle National MA© 2008

In $\triangle ABC, \angle C$ is a right angle, AC = 8, and the length of the median to the hypotenuse is 6. Find the length of \overline{CB} .

Answer	:					Answei	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#12 Geometry – Hustle National MA© 2008

In $\triangle ABC, \angle C$ is a right angle, AC = 8, and the length of the median to the hypotenuse is 6. Find the length of \overline{CB} . #12 Geometry – Hustle National MAO 2008

In $\triangle ABC, \angle C$ is a right angle, AC = 8, and the length of the median to the hypotenuse is 6. Find the length of \overline{CB} .

5

Answer :						Answer :												
Round	1	2	3	4	5						Round	1	2	3	4			

#13 Geometry – Hustle National MA© 2008

At 2:15 A.M., find the degree measure of the smaller angle formed by the hour and minute hands of a clock. #13 Geometry – Hustle National MAO 2008

At 2:15 A.M., find the degree measure of the smaller angle formed by the hour and minute hands of a clock.

Answer :						Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#13 Geometry – Hustle National MA© 2008

At 2:15 A.M., find the degree measure of the smaller angle formed by the hour and minute hands of a clock. #13 Geometry – Hustle National MA© 2008

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Answer :						Answer	Answer :						
Round	1	2	3	4	5	Round	1	2	3	4	5		

#14 Geometry – Hustle National MA© 2008

What is the most specific name for the quadrilateral formed by joining, in order, the midpoints of the sides of a rectangle?

#14 Geometry – Hustle National MAO 2008

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Answer	:					Answei	Answer :							
Round	1	2	3	4	5	Round	1	2	3	4	5			

#14 Geometry – Hustle National MA© 2008

What is the most specific name for the quadrilateral formed by joining, in order, the midpoints of the sides of a rectangle?

#14 Geometry – Hustle National MAO 2008

What is the most specific name for the quadrilateral formed by joining, in order, the midpoints of the sides of a rectangle?

Answer : _____

Round 1 2 3 4 5

Answer : _____

#15 Geometry – Hustle National MAΘ 2008

Find the area of a sector of a circle that intercepts a 30° arc when the radius is $3\sqrt{2}$. Express your answer in terms of π . #15 Geometry – Hustle National MAΘ 2008

Find the area of a sector of a circle that intercepts a 30° arc when the radius is $3\sqrt{2}$. Express your answer in terms of π .

Answer	:					Answe	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

#15 Geometry – Hustle National MA© 2008

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Find the area of a sector of a circle that intercepts a 30° arc when the radius is $3\sqrt{2}$. Express your answer in terms of π .

Answer :						Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#16 Geometry – Hustle National MA© 2008

A triangle and a trapezoid have equal areas and equal altitudes. If the base of the triangle is 18 inches, then find the median of the trapezoid. #16 Geometry – Hustle National MA© 2008

A triangle and a trapezoid have equal areas and equal altitudes. If the base of the triangle is 18 inches, then find the median of the trapezoid.

Answer	:					Answei	Answer :							
Round	1	2	3	4	5	Round	1	2	3	4	5			

#16 Geometry – Hustle National MA© 2008

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Answer :						Answe	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

#17 Geometry – Hustle National MA© 2008

The base of a right rectangular solid is a rectangle whose sides are 2 and 6. If the diagonal of the solid is 11, find the volume of the solid.

#17 Geometry – Hustle National MA© 2008

The base of a right rectangular solid is a rectangle whose sides are 2 and 6. If the diagonal of the solid is 11, find the volume of the solid.

Answer :						Answer :							
Round	1	2	3	4	5	Round	1		2	3	4	5	

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The base of a right rectangular solid is a rectangle whose sides are 2 and 6. If the diagonal of the solid is 11, find the volume of the solid.

Answer :						Answei	· :				
Round	1	2	3	4	5	Round	1	2	3	4	5

#18 Geometry – Hustle National MA© 2008

The areas of two similar triangles are 96 and 6. If the perimeter of the larger triangle is 48, find the perimeter of the second. #18 Geometry – Hustle National MA© 2008

The areas of two similar triangles are 96 and 6. If the perimeter of the larger triangle is 48, find the perimeter of the second.

Answer :						Answei	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

#18 Geometry – Hustle National MA© 2008

The areas of two similar triangles are 96 and 6. If the perimeter of the larger triangle is 48, find the perimeter of the second. #18 Geometry – Hustle National MAO 2008

The areas of two similar triangles are 96 and 6. If the perimeter of the larger triangle is 48, find the perimeter of the second.

Answer :						Answei	·:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#19 Geometry – Hustle National MA© 2008

Find the length of the altitude in an equilateral triangle that has an area of $\sqrt{3}$.

#19 Geometry – Hustle National MA© 2008

Find the length of the altitude in an equilateral triangle that has an area of $\sqrt{3}$.

Answer :						Answe	r:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#19 Geometry – Hustle National MA© 2008

Find the length of the altitude in an equilateral triangle that has an area of $\sqrt{3}$.

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Find the length of the altitude in an equilateral triangle that has an area of $\sqrt{3}$.

Answer :						Answer	:				
Round	1	2	3	4	5	Round	1	2	3	4	5

#20 Geometry – Hustle National MA© 2008

Given regular octagon ABCDEFGH. Find the measure of the acute angle formed when \overline{AD} and \overline{CG} intersect.

#20 Geometry – Hustle National MA© 2008

Given regular octagon ABCDEFGH. Find the measure of the acute angle formed when \overline{AD} and \overline{CG} intersect.

Answer :						Answei	Answer :						
Round	1	2	3	4	5	Round	1	2	3	4	5		

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Answer	•	
	٠	

Answer : _____

Round 1 2 3 4 5

#21 Geometry – Hustle National MA© 2008

Given right $\triangle ABC$ with right angle at B. The altitude to the hypotenuse is drawn with D on \overline{AC} . If BC = 6, DC = 4, find the length of \overline{AB} . #21 Geometry – Hustle National MA© 2008

Given right $\triangle ABC$ with right angle at B. The altitude to the hypotenuse is drawn with D on \overline{AC} . If BC = 6, DC = 4, find the length of \overline{AB} .

Answer :						Answei	Answer :						
Round	1	2	3	4	5	Round	1	2	3	4	5		

#21 Geometry – Hustle National MA© 2008

Given right $\triangle ABC$ with right angle at B. The altitude to the hypotenuse is drawn with D on \overline{AC} . If BC = 6, DC = 4, find the length of \overline{AB} . #21 Geometry – Hustle National MAO 2008

Given right $\triangle ABC$ with right angle at B. The altitude to the hypotenuse is drawn with D on \overline{AC} . If BC = 6, DC = 4, find the length of \overline{AB} .

Answer :					Answei	Answer :					
Round	1	2	3	4	5	Round	1	2	3	4	5

#22 Geometry – Hustle National MA© 2008

A chord of a circle has length 12. The chord is 7 units from the center of the circle. Find the circumference of the circle in terms of π .

#22 Geometry – Hustle National MA© 2008

A chord of a circle has length 12. The chord is 7 units from the center of the circle. Find the circumference of the circle in terms of π .

Answer :						Answe	Answer :						
Round	1	2	3	4	5	Round	1	2	3	4	5		

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Answer :						Answe	::				
Round	1	2	3	4	5	Round	1	2	3	4	5

#23 Geometry – Hustle National MA© 2008

Angles A and B are complementary. Their supplements differ by 64°. Find the measure of the smaller angle in degrees.

#23 Geometry – Hustle National MAO 2008

Angles A and B are complementary. Their supplements differ by 64°. Find the measure of the smaller angle in degrees.

Answer :						Answer	:			
Round	1	2	3	4	5	Round	1	2	3	4

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#23 Geometry – Hustle National MAO 2008

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5

Answer :					Answe	::					
Round	1	2	3	4	5	Round	1	2	3	4	5

#24 Geometry – Hustle National MA© 2008

The longest diagonal of a regular hexagon has a length of 8. Find the area of the hexagon.

#24 Geometry – Hustle National MA© 2008

The longest diagonal of a regular hexagon has a length of 8. Find the area of the hexagon.

Answer	:	
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Round 1 2 3 4 5

Answer : _____

Round 1 2 3 4 5

#24 Geometry – Hustle National MA© 2008

The longest diagonal of a regular hexagon has a length of 8. Find the area of the hexagon.

#24 Geometry – Hustle National MA© 2008

The longest diagonal of a regular hexagon has a length of 8. Find the area of the hexagon.

Answer : _____

Answer : _____

Round 1 2 3 4 5

#25 Geometry – Hustle National MA© 2008

In isosceles trapezoid ABCD with \overline{AB} the smaller base, AB = 4, DC = 16 and the length of the altitude is 6. Find the absolute value of the difference of the upper base angle and the lower base angle.

#25 Geometry – Hustle National MA© 2008

In isosceles trapezoid ABCD with \overline{AB} the smaller base, AB = 4, DC = 16 and the length of the altitude is 6. Find the absolute value of the difference of the upper base angle and the lower base angle.

Answer :						Answer	er :							
Round	1	2	3	4	5	Round	1	2	3	4	5			

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#25 Geometry – Hustle National MAO 2008

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Ans	wer	:		

Answer : _____

Round 1 2 3 4 5