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Scoring

- 0:00 0:30 10 points
- 0:31 1:00 8 points
- 1:01 1:30 6 points
- 1:31 2:00 4 points
- If the rst person to answer is correct, they receive 2 Bonus Points.



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Rules



Rules

5. Answers with radicals must be simpli ed. Denominators must be rationalized.

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6. Exponents should be positive.

7.

Sample Problem # 1

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Sample Problem

RESET :

Solve for *x* in the equation

 x^2 6x 3 = 0

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Sample Problem

Answer: $3 + 2^{\bigcirc}\overline{3}$ and $3 = 2^{\bigcirc}\overline{3}$.

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Algebra II Comprehensive Part 1 Comprehensive Part 2 Team

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Algebra II Comprehensive Part 1 Comprehensive Part 2 Team

Question # 1 Question # 2

Geometry Question # 1

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Algebra II Comprehensive Part 1 Comprehensive Part 2 Team

Question # 1 Question # 2

Geometry Question # 2

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Question # 1 Question # 2

Geometry Question # 2

RESET

Points A, B, C and D are on the circle, with secant lines \overline{AC} and \overline{BD} intersecting at point E. If $m\overline{BC} = 60^{\circ}$ and $m \setminus BEC = 50^{\circ}$, nd $m \setminus ECD$, in degrees.



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Question # 1 Question # 2

Geometry Question # 2

Answer:

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Algebra II Comprehensive Part 1 Comprehensive Part 2 Team

Question # 1 Question # 2

Geometry Question # 2

Answer: 20

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Question # 3
Question # 4

Round 1

Algebra II

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Question # 3 Question # 4

Algebra II Question # 3

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Question # 3 Question # 4

Algebra II Question # 3

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If x = 1 is a solution to $x^3 + 2x^2 = 31x + 28 = 0$, nd the larger of the other two solutions.

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Question # 3 Question # 4

Algebra II Question # 3

Answer:

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Question # 3 Question # 4

Algebra II Question # 4

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Question # 3 Question # 4

Algebra II Question # 4

Answer: 9

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Question # 5 Question # 6

Comprehensive Part 1 Question # 5

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Question # 5 Question # 6

Comprehensive Part 1 Question # 5

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Question # 5 Question # 6

Comprehensive Part 1 Question # 5

Answer:

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Question # 5 Question # 6

Comprehensive Part 1 Question # 5

Answer: $\frac{3}{2}, \frac{5}{2}$

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Question # 5 Question # 6

Comprehensive Part 1 Question # 6

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Question # 5 Question # 6

Comprehensive Part 1 Question # 6

RESET If $sin = \frac{1}{2}$, rd = 1 tan^2 .

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Question # 5 Question # 6

Comprehensive Part 1 Question # 6

Answer:

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Question # 5 Question # 6

Comprehensive Part 1 Question # 6

Answer: $\frac{2}{3}$

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Question # 7 Question # 8

Comprehensive Part 2 Question # 7

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Question # 7 Question # 8

Comprehensive Part 2 Question # 7

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Let ? be de ned by $a ? b = a^2 + 2^b$. If 5 ? b = 41, what is b? Provide your answer as an integer or simpli ed fraction.

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Question # 7 Question # 8

Comprehensive Part 2 Question # 7

Answer: 4

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Question # 7 Question # 8

Comprehensive Part 2 Question # 8

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Question # 7 Question # 8

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Question # 9 Question # 10

Team Question # 9

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Question # 9 Question # 10

Team Question # 9

RESET

Find the summation of

Volume of a right square based pyramid with a height of 5 and a base side of length 3

+ Measure of an exterior angle in a regular pentagon + Radius of circle de ned by $x^2 + 6x + y^2$ 12y = 4

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Question # 9 Question # 10

Team Question # 9

Answer:

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Question # 9 Question # 10

Team Question # 9

Answer: 94

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Question # 9 Question # 10

Team Question # 10

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Question # 9 Question # 10

Team Question # 10

RESET

A sequence is defined by $a_n = a_{n-1} + a_{n-2} + a_{n-3}$ for n = 4. Suppose $a_4 = 20$, $a_5 = 36$, and $a_7 = 121$. What is a_3 ?

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Question # 9 Question # 10

Team Question # 10

Answer:

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End of Round 1

Question # 10

University of North Alabama Alabama Statewide Math Contest - Round 1 Division Two

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