

2002 Palm Harbor Invitational Algebra I Team Question 1

The equation of a line is $12x - 7y = 5$.

A = the y-coordinate of the y-intercept

B = the x-coordinate of the x-intercept

C = the slope of the line

Find: $\frac{AC + BC}{A + B}$

2002 Palm Harbor Invitational Algebra I Team Question 2

A calculator is on sale for 12% off the original value. The sale price is \$13.20. What was the original price of the calculator?

2002 Palm Harbor Invitational Algebra I Team Question 3

How many squares of any size are entirely outlined by an 8×8 checkerboard?

2002 Palm Harbor Invitational Algebra I Team Question 4

In Steven's science class the final grade is the average of 5 test grades. His first 4 grades were 80%, 85%, 93%, and 97%. What percent must his score be on the final test for his average to be 90%?

2002 Palm Harbor Invitational Algebra I Team Question 5

Given: The equation of the line passing through $(8, -3)$ and $(-4, 5)$ is written in the form $Ax + By = C$.

Find: $\frac{A^2}{BC}$

2002 Palm Harbor Invitational Algebra I Team Question 6

The Lansel family wants to watch the space shuttle launch at 5:45 a.m. at the Kennedy Space Center. Safety regulations require them to arrive two hours prior to the launch. If their house in Safety Harbor is 210 miles away from their destination and they drive at a constant 60 mph, when should they leave to arrive on time?

2002 Palm Harbor Invitational Algebra I Team Question 7

What is $\overline{.2684}$ expressed as a fraction in lowest terms?

2002 Palm Harbor Invitational Algebra I Team Question 8

Miss Fish wants to send a letter to Mr. B. but has forgotten his house number. She remembers that Mr. A, Mr. B, Mrs. C, Miss D, and Mr. E live on the same street. The house numbers are 1, 2, 3, 4, and 5. Nobody lives in the house with the corresponding number as the letter of their last name (Mr. A does not live in house 1 etc). Mrs. C lives in house 4. Mr. A lives next door to Mr. B. Mr. E does not live in house 1. What is Mr. B's house number?

Use the following chart if you want.

	1	2	3	4	5
Mr. A					
Mr. B					
Mrs. C					
Miss D					
Mr. E					

2002 Palm Harbor Invitational Algebra I Team Question 9

Arum works at Muscle Beach Lemonade in the mall. A customer purchases 2 lemonades and 1 hotdog with a \$10 bill and receives correct change of \$2. Another customer purchases 3 lemonades and 3 hotdogs and pays \$18. How much does one hotdog and one lemonade cost altogether?

2002 Palm Harbor Invitational Algebra I Team Question 10

Solve for x:

$$\frac{3}{x+2} + \frac{2}{x+3} = 1$$

2002 Palm Harbor Invitational Algebra I Team Question 11

Given: $ab = ab - a - b$
 $R = 3129$
 $S4 = 5$

Find: $R+S$

2002 Palm Harbor Invitational Algebra I Team Question 12

The area of a rectangle is 161 cm^2 and its perimeter is 60 cm. Find the length in cm of the longer side of the rectangle.

2002 Palm Harbor Invitational Algebra I Team Question 13

There are 8 people in a tournament and every person shakes everyone else's hand. How many handshakes occurred?

2002 Palm Harbor Invitational Algebra I Team Question 14

The product of two numbers is 27 and the sum of the two numbers is 10.5.
What are the numbers?

2002 Palm Harbor Invitational Algebra I Team Question 15

The acceleration of an object varies directly with the force on the object and inversely with the object's mass. If the acceleration is 20 units when the mass is 5 kg and the force is 4 Newtons, then the acceleration is how many units when the mass is 2 kg and the force is 8 Newtons?