

Includes

Linear Equations,

Logarithms,

Exponents,

Sequences,

Absolute Values,

Order of Operations,

Percentages,

Quadratics,

Matrices, and more!

Algebra Chain Letters  
12 math exercises

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# PREVIEW

Algebra “Chain Letters” are composed of 5 brief math questions.

Answer each one, in sequence, to reach the last letter -→ the solution!

Here is a trial run for you to try.

Algebra Chain Letters...

T is the y-intercept of  $x + 2y = 4$

$4T + 20 = R$

$\sqrt{R - 12}$  is I

$3^I = A$

The radius of the circle  
 $x^2 + (y + 2)^2 = A$  is L

What is L?

**SOLUTIONS→**

Algebra Chain Letters...

SOLUTIONS  $T \Rightarrow R \Rightarrow I \Rightarrow A \Rightarrow L$

T is the y-intercept of  $x + 2y = 4$

$$T = 2$$

$$4T + 20 = R$$

$$(4)(2) + 20 = 28 \quad R = 28$$

$$\sqrt{R - 12} \text{ is } I \quad I = 4$$

$$3^I = A \quad A = 81$$

The radius of the circle

$$x^2 + (y + 2)^2 = A \text{ is } L$$

$$(x - h)^2 + (y - k)^2 = r^2$$

What is L?

$$L = 9$$

Here are 12 more chains, involving a variety of algebra topics...

Enjoy!

1)

Algebra Chain Letters...

$$\left. \begin{array}{l} x - y = -8 \\ x + 3y = 4 \end{array} \right\} x + y = A$$

$$\left(\frac{1}{3}\right)^A = B$$

$$B|t-2| \leq 18 \quad \left. \vphantom{B|t-2| \leq 18} \right\} \text{The range of } t \text{ is } C$$

$$\sqrt{C+8} = D$$

$$(m-D)(m+D) = m^2 - E$$

What is E?

12)

Algebra Chain Letters...

P is the maximum value of the curve

$$y = -2(x + 5)^2 - 8$$

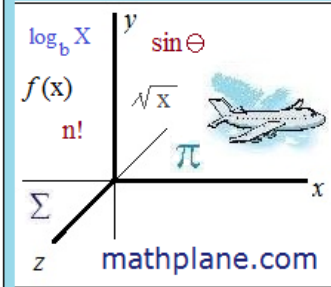
$$\frac{1}{5}L + P = 12$$

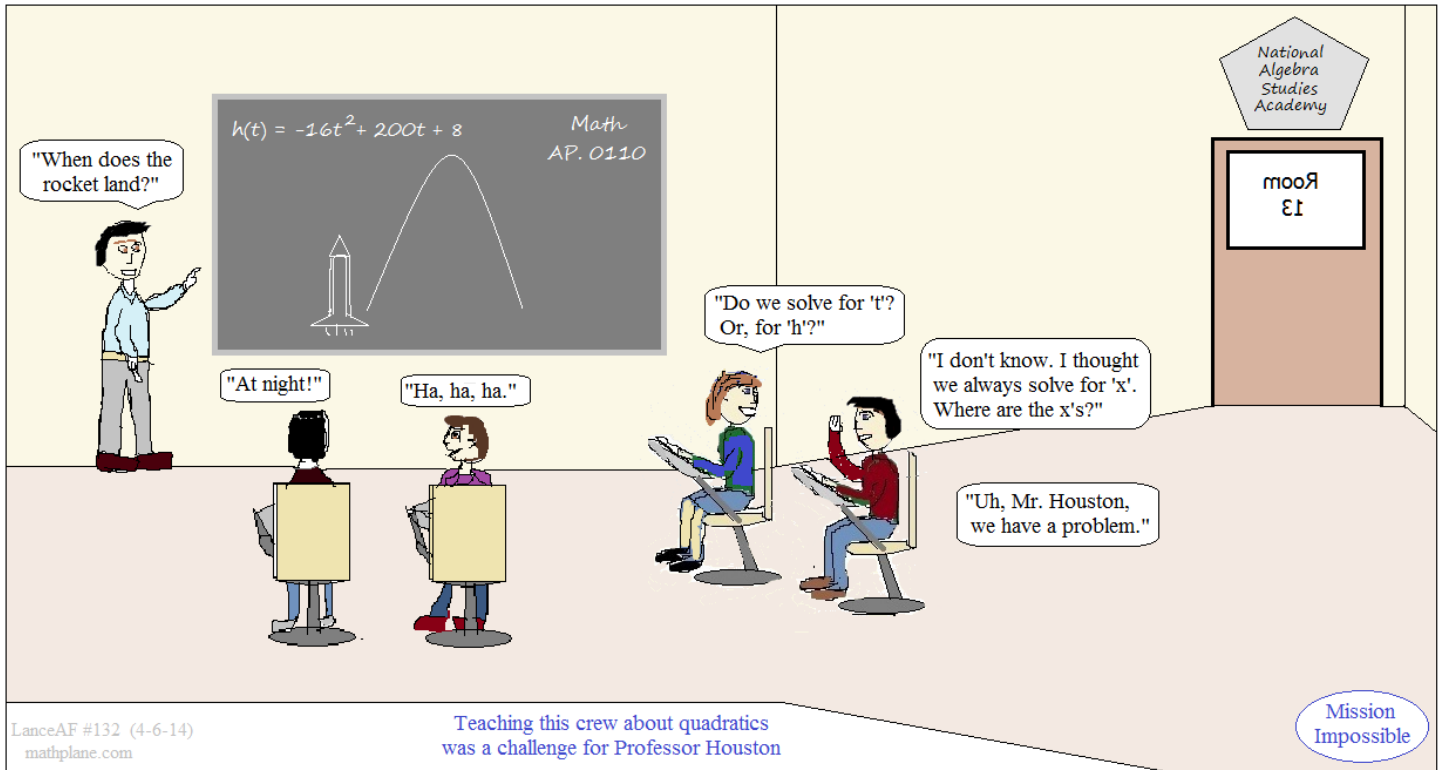
$$\log(L) = A$$

$$N = LP^A$$

$$E = \sqrt[N]{N}$$

What is E?





SOLUTIONS-→

Algebra Chain Letters...

**SOLUTIONS**

$A \Leftrightarrow B \Leftrightarrow C \Leftrightarrow D \Leftrightarrow E$

$$\left. \begin{array}{l} x - y = -8 \\ x + 3y = 4 \end{array} \right\} \quad \begin{array}{l} x + y = A \\ (-5, 3) \quad A = -2 \end{array}$$

$$\left(\frac{1}{3}\right)^A = B \quad B = 9$$

$$B|t-2| \leq 18 \quad \left. \begin{array}{l} \text{The range of } t \text{ is } C \\ 0 \leq t \leq 4 \quad \text{range } C = 4 \end{array} \right\}$$

$$\sqrt{C} + 8 = D$$

$$D = 10$$

$$(m - D)(m + D) = m^2 - E$$

What is E?

$$E = 100$$

Algebra Chain Letters...

SOLUTIONS

P ⇔ L ⇔ A ⇔ N ⇔ E

P is the maximum value of the curve

$$y = -2(x + 5)^2 - 8$$

this parabola opens downward, so the maximum value is the vertex....

$(-5, -8)$

$$P = -8$$

$$\frac{1}{5}L + P = 12$$

$$\frac{1}{5}L + (-8) = 12$$

$$\frac{1}{5}L = 20$$

$$L = 100$$

$$\log(L) = A$$

$$A = 2$$

$$\log(100) = 2$$

$$N = LP^A$$

$$N = 100 \cdot (-8)^2$$

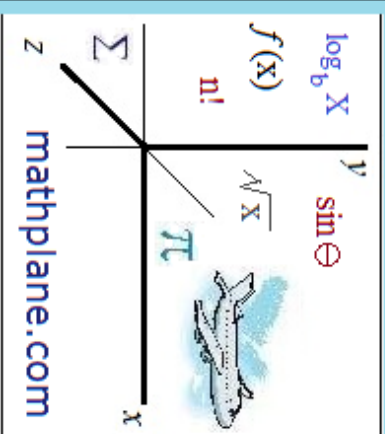
$$N = 6400$$

$$E = \sqrt[3]{N}$$

$$\sqrt[3]{6400} = 80$$

What is E?

E = 80



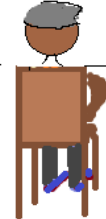
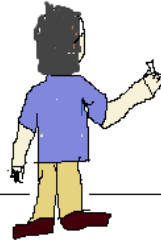


Product Placement

"Suppose you have three Ford Mustangs. Inside each -- on the plush, leather seats -- is a six-pack of Coca-Cola...."

"How many cans of refreshing, ice cold Coke are there?"

Multiplication: Word Problems



LanceAF #41 (7-14-12)  
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"... and, the product of 6 and 3 is 18 cans of Coke."

Multiplication: Word Problems

$$\frac{6 \text{ cans}}{\text{mustang}} \times 3 \text{ mustangs} = 18 \text{ cans}$$

JUST DO IT.

SLOPE

$$\text{McDonald's} = \frac{\text{rise}}{\text{run}}$$

Volume of Sphere

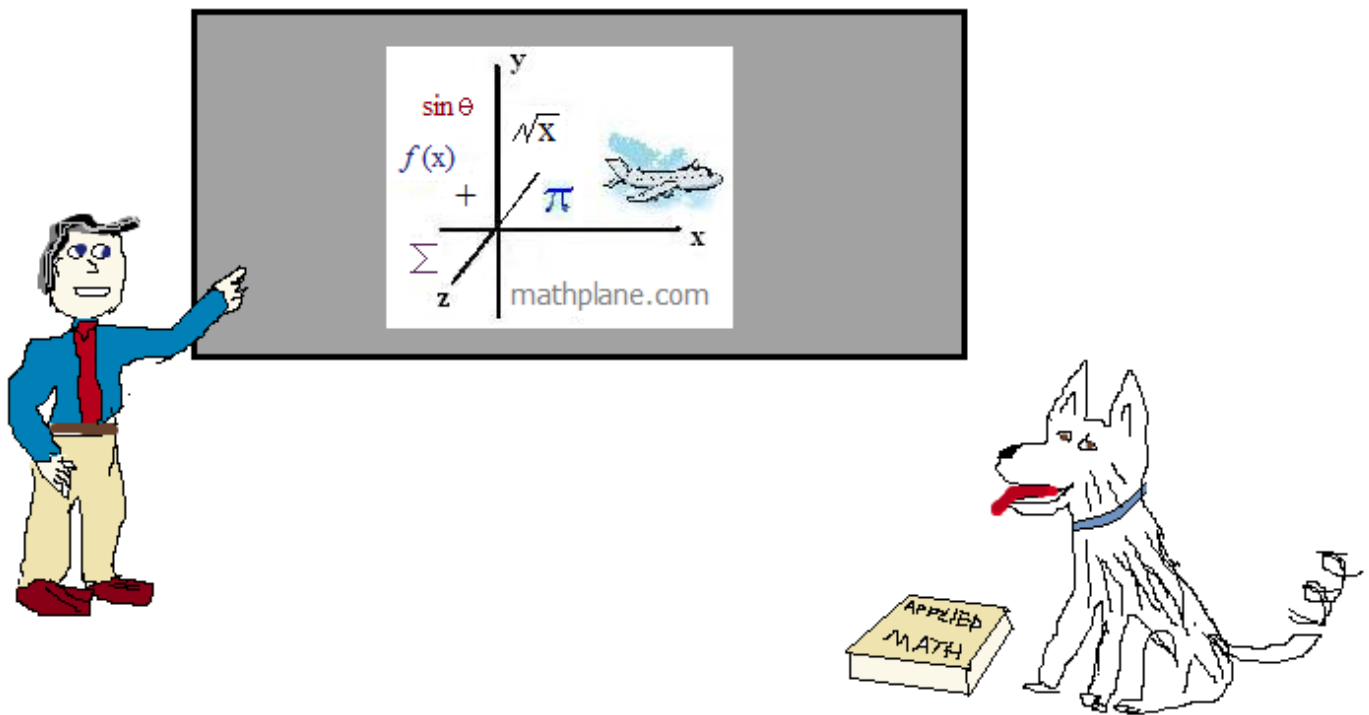
$$\text{AT&T Globe} = \frac{4}{3} \pi r^3$$

presented by AT&T

A new way of funding education

< END OF PREVIEW >

Thanks for visiting! To see the other chain letter exercises, download the product file. Proceeds go to mathplane site maintenance and improvement (and, treats for Norway the Husky!). We appreciate your support.



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