Trial and Improvement

Trial and improvement is the easiest type of mathematics you can do. Trial and improvement just means 'take a guess and see how close you are'.

Part 1 Simple Equations

Using you calculator to help, solve these equations using trial and improvement.

1. $x + 67 = 123$
2. $89 + x = 436$
3. $x - 67 = 282$
4. $962 - x = 386$
5. $15x = 825$
6. $x \times 77 = 1001$
7. $512 \div x = 8$
8. $x \div 17 = 76$
9. $2378 + x = 3456$
10. $763 - x = 99$
11. $x \times 101 = 10100$
12. $x \div 84 = 0.5$

Part 2 A Number Times Itself

All these equations are of the same type. You must guess the number that, when multiplied by itself, gives you the answer shown.

1. $x \times x = 81$
2. $x \times x = 144$
3. $x \times x = 400$
4. $x \times x = 625$
5. $x \times x = 1296$
6. $x \times x = 9801$
7. $x \times x = 10000$
8. $x \times x = 0.25$
9. $x \times x = 0.01$

Part 3 Laying out your results

a. Copy the table on the right.

b. Use the table to solve the equation: $x^2 = 30$.

> ***Instructions:***
> - *Write a guess for x in the table.*
> - *Calculate x^2 and add it to the 'Result' column.*
> - *Say whether the result is **'too high'** or **'too low'**.*

c. Draw a new table and solve the equation: $x^2 = 60$.

d. Repeat for the equation: $x^2 = 1000$.

e. Repeat for the equation: $x^3 = 100$.

	Guess	Result	Too High / Too Low
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

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