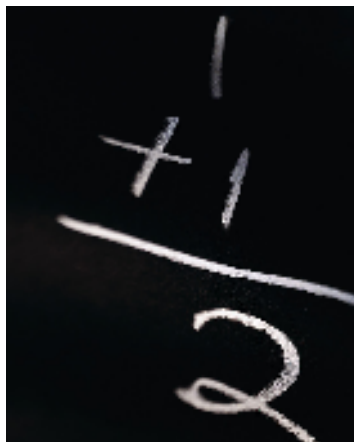


Think of Any Number



Effect: You are able to determine a number that a student is thinking of by asking her to tell you on which of 6 cards her number appears.

You will need: Six special number cards (on the next page) copied onto card stock and cut apart. A volunteer.

Secret: Notice the first number of each card, in the upper left corner (1 • 2 • 4 • 8 • 16 • 32). These are special numbers, each double the one before it. All you have to do is add the special number on each card that the spectator replies "yes." For instance, let's say the chosen number is 45. The spectator will answer "yes" for cards 1, 4, 8 and 32. Add these numbers together and you get..... 45. As you are showing the cards, you'll need to know what the special number is on each one. Keep them in order, so you don't have to look at the cards as you do the trick.

Method: Have a spectator choose any number between 1 and 63. Tell them to write it down and put the paper in their pocket. Claim that you can tell what the number is by listening to the tone of their voice as they answer yes or no to the following questions.

Close your eyes and show them the first of these cards. Ask if their number is on the card. When they reply, pretend you are really concentrating. Show the next card, and ask again. Do this for all 6 cards. When done, pause and then announce in a loud clear voice what number they picked... it's correct!

A Tip from the Math-magician: To make sure the spectator finds her number on every card where it appears, point out that the cards are numbered left to right, in order. Otherwise, if they don't realize this (and some won't – stage fright and all that) they may miss their number on a card, and the big finish would not be very amazing!

Math Application: I'm hoping someone can tell me the name of the principle at work here, but this is an excellent way to encourage elementary students to add quickly in their heads. You could demonstrate how it would work with fewer cards (4 cards could cover any number up to 31, for example). If you are really ambitious, or if you want to challenge your students, get them to design cards that would work for 7 or even 8 cards (for sums up to 127 or 255)!

For more ideas on how to use simple magic tricks to introduce math concepts or add some fun to your lesson, go to www.math-a-magic.com/downloads.htm or call 770-640-6509 (toll free 1-866-490-7323).

1 3 5 7 9 11 13 15
17 19 21 23 25 27 29 31
33 35 37 39 41 43 45 47
49 51 53 55 57 59 61 63

8 9 10 11 12 13 14 15
24 25 26 27 28 29 30 31
40 41 42 43 44 45 46 47
56 57 58 59 60 61 62 63

2 3 6 7 10 11 14 15
18 19 22 23 26 27 30 31
34 35 38 39 42 43 46 47
50 51 54 55 58 59 62 63

16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31
48 49 50 51 52 53 54 55
56 57 58 59 60 61 62 63

4 5 6 7 12 13 14 15
20 21 22 23 27 29 30 31
36 37 38 39 44 45 46 47
52 53 54 55 60 61 62 63

32 33 34 35 36 37 38 39
40 41 42 43 44 45 46 47
48 49 50 51 52 53 54 55
56 57 58 59 60 61 62 63

Copy this page onto heavy paper, then carefully cut out the cards above.