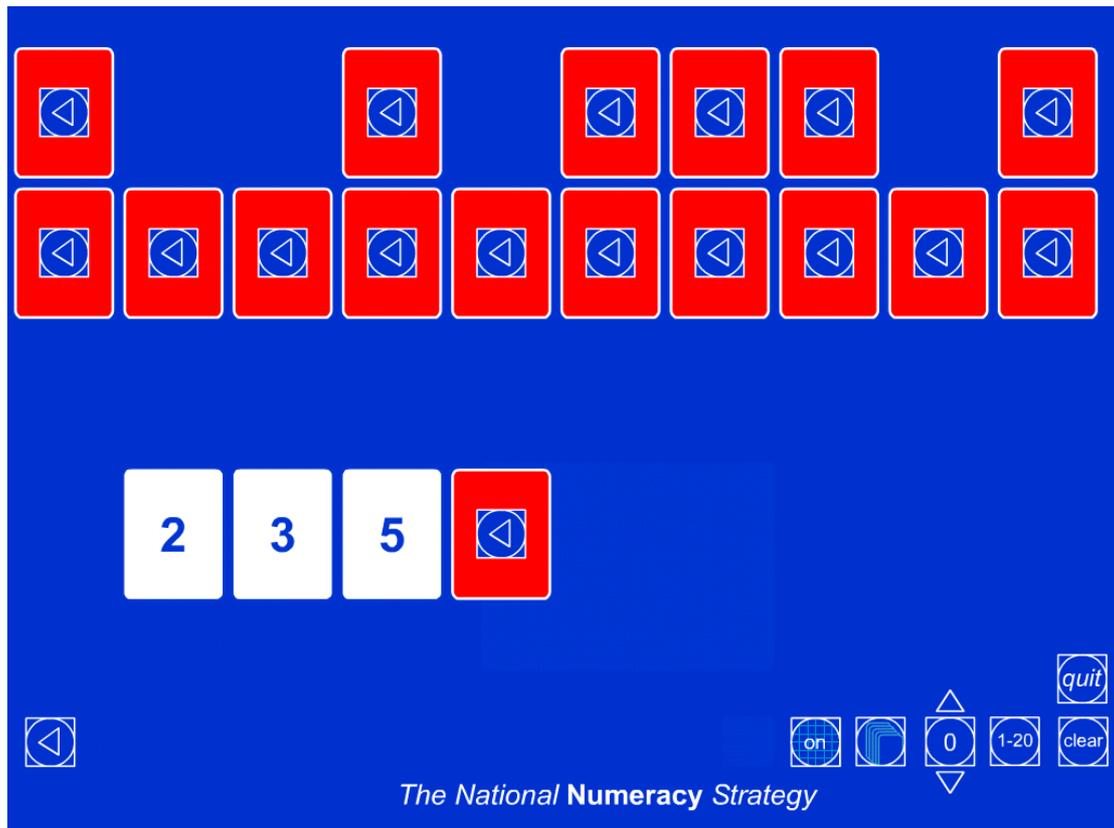
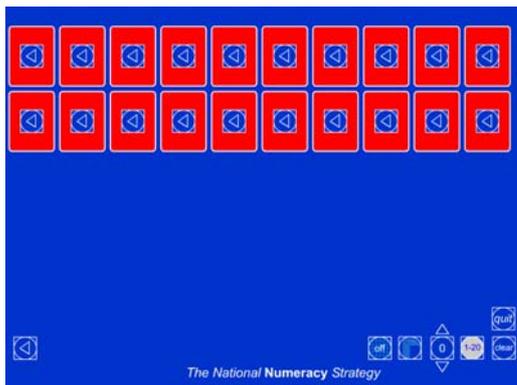


## Tutorial 8      20 Cards



Click on the  icon to reveal a set of ordered cards with the numbers 1 to 20 on the hidden faces.



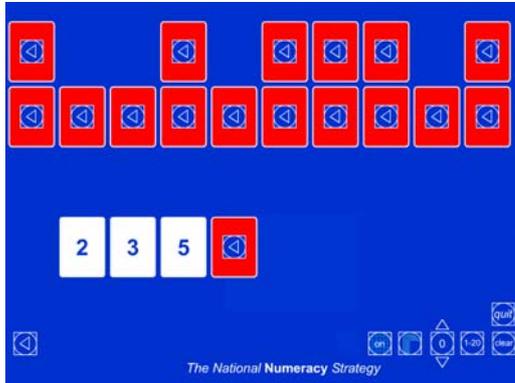
Click on the icon showing off. This will show on and turn on a grid, hidden from view, into which the cards can be placed.

Turn over the cards 2, 3 and 5 as shown above by clicking on the outer edge of the

cards as shown here .

Move the cards by clicking on the centre of the card and dragging it into

position  as shown below.



**Q: What could the next number be? Can you see a pattern?**

Drag down the card you think it will be.

This rule used in this example could represent double the previous number and then subtract 1.

**Q: What will the next number be?**

Click on the outer section of your card to reveal the next number. If you used the same rule the number would be 9.

Reset the 20 Cards ITP by clicking on the clear icon .

Click on the icon  and select the make a stack option.

Enter these values using the arrow keys:

These mean you are choosing 20 cards, with the first card number 2, the first step size 2 and the step increment 1.

Click on .

Hide this information by clicking on the stack icon .

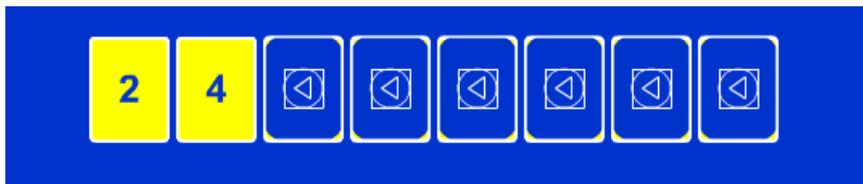
The cards will appear in the bottom right-hand corner of the screen.

Turn over the first two cards, and drag them to the top of the screen.

**Q: What could the next number be?**

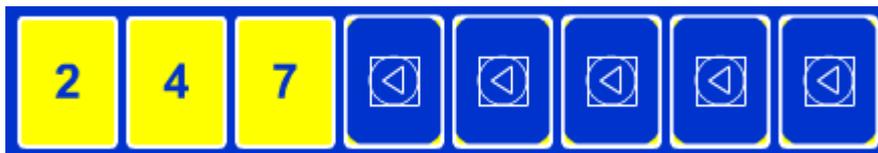
**Q: Could this be the only number or could there be others? Why?**

Drag the other cards to form a line, but without turning them over.



At this stage, the two numbers suggest there are many possible sequences, the even numbers, double the previous number, triple the previous number and subtract 2, etc.

Turn over the next number by clicking on the third card.



**Q: What could the next number be?**

Continue the sequences, suggesting rules and predicting before turning the card over.

Clear the screen and select the stack icon as before. You can make a stack of square numbers, prime numbers, etc. Click on even numbers and hide the information. Turn over and drag the cards to show the 10 even numbers.

You can create and display any set of numbers by clicking on the up and down arrow keys above the displayed zero. When you have selected the card number of your choice, click on the number. This creates a card you can drag and reveal.

Use the 20 Cards ITP to explore number patterns and sequences.