

Binary Search Cards

Version 1: Number 1 to 16
In order on 4 by 4 cards

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In order on 4 by 4 Cards

Cards 1A and 1B are back to back on one card

Card 1A

cut out this area			
1	2	3	4
5	6	7	8

Card 1B

9	10	11	12
13	14	15	16
cut out this area			

Cards 4A and 4B are back to back on one card

Card 4A

cut out			
1	2	3	4
cut out			
9	10	11	12

Card 4B

5	6	7	8
cut out			
13	14	15	16
cut out			

Cards 1A and 1B are back to back on one card

Card 2A

cut out this area	1	2
	5	6
	9	10
	13	14

Card 2B

3	4	cut out this area
7	8	
11	12	
15	16	

Cards 4A and 4B are back to back on one card

Card 3A

c u t o u t	1	c u t o u t	3
	5		7
	9		11
	13		15

Card 3B

2	c u t o u t	4	c u t o u t
6		8	
10		12	
14		16	

Base Card

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

A student picks any number from the base card. They find that number on each of the other 4 cards and stack those cards faces on top of the base card.

The number they selected is reveled on the base card

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Procedure:

Place the base card on the desk student with the numbers facing up and ask a student to think of a number on the base card. Have the student tell a friend the number or have them write it down on a piece of paper without you looking at the number.

Hand the student a second card (it does not matter which one you use after the first card). Have them look on either side of the card to find their number and then place that side of the card with the number they selected facing on on top of the first card. To the same thing with the last two cards.

Pick up the entire stack of cards. Look closely at the numbers. One of them is a number on the base card. All the other numbers you see are on the hole cards. The number visible on the base card is their number. Announce their number! Have them state you predicted their number. If there is a question have the student show the number they wrote down or have the friend verify the number is correct if they told a friend.

Preparation:

Print out the 4 pairs of cards on the next 4 pages (pages 4 to 7). For each page cut out the 2 cards along the outside gray borders. Glue Cards 1A and 1B together back to back with the numbers facing out. Card 1B will need to be rotated 180 degrees so that the cut out areas match on the front and back. Do the same for Cards 4A and 4B.

Glue Cards 2A and 2B together back to back with the numbers facing out. The numbers on the front and back will both face up and the cutout areas will match on both sides.

Cut out the inside white areas labeled “**cut out**” on each of the 4 glued cards. There are many ways to cut out the inside areas labeled **cut out** without bending the cards. The safest way I have found is to use a hand held paper hole punch. I punch 3 holes next to each other inside the cutout area and then use a scissors to carefully cut out the rectangles.

Print the base card on page 8. A second base card with a different color is provided. When you first practice the trick this card makes it easier to see the number on the base card at the end of the rick. The regular base card works better when performing the actual trick

If you have a printer that supports printing on both sides you can save time. Print the templates on the pages 10 to 13 using the **print on two sides** option in the print command box. You may need to open a dialog box to find this option. You will get the 4 cards already in the correct orientation with a front and back. Cut out the four cards along the outside gray border. Do not cut out the gray borders. Cut out the inside white areas labeled **cut out**. Print the base card on page 14.

Card 1A

	cut out				
	1	2	3	4	
	5	<u>6</u>	7	8	

Cut out these two cards.

Use a glue stick to glue the cards back to back. The numbers on the back side will be upside down compared to the front side so that the cut out areas match.

After you have glued the cards together cut out the areas labeled "cut out"

Card 1B

	<u>9</u>	10	11	12	
	13	14	15	16	
	cut out				

Card 2A

	cut out	1	2	
		5	<u>6</u>	
		<u>9</u>	10	
		13	14	

Cut out these two cards.

Use a glue stick to glue the cards back to back. The numbers on the front and back sides will both face up so that the cut out areas match.

After you have glued the cards together cut out the areas labeled "cut out"

Card 2B

	3	4	cut out	
	7	8		
	11	12		
	15	16		

Card 3A

	cut out	1	cut out	3	
		5		7	
		<u>9</u>		11	
		13		15	

Cut out these two cards.

Use a glue stick to glue the cards back to back. The numbers on the front and back sides will both face up so that the cut out areas match.

After you have glued the cards together cut out the areas labeled "cut out"

Card 3B

	2	cut out	4	cut out	
	<u>6</u>		8		
	10		12		
	14		16		

Card 4A

cut out			
1	2	3	4
cut out			
<u>9</u>	10	11	12

Cut out these two cards.

Use a glue stick to glue the cards back to back. The numbers on the back side will be upside down compared to the front side so that the cut out areas match.

After you have glued the cards together cut out the areas labeled "cut out"

Card 4B

5	<u>6</u>	7	8
cut out			
13	14	15	16
cut out			

Base Card

	1	2	3	4	
	5	<u>6</u>	7	8	
	<u>9</u>	10	11	12	
	13	14	15	16	

Darker practice base card

	1	2	3	4	
	5	<u>6</u>	7	8	
	<u>9</u>	10	11	12	
	13	14	15	16	

**The following 4 pages
are set up to print the 4 sets
of hole cards back to back.**

**If you have a printer that prints
on 2 sides these templates
can save you time.**

Card 1A

cut out

1	2	3	4
5	<u>6</u>	7	8

Card 4A

cut out

1	2	3	4
cut out			
<u>9</u>	10	11	12

Card 1B back

cut out			
13	14	15	16
$\overline{9}$	10	11	12

Card 4B back

cut out			
13	14	15	16
cut out			
5	$\overline{6}$	7	8

Card 2A

	cut out	1	2		
		5	<u>6</u>		
		<u>9</u>	10		
		13	14		

Card 3A

	cut out	1	cut out	3	
		5		7	
		<u>9</u>		11	
		13		15	

Card 2B

	3	4	cut out	
	7	8		
	11	12		
	15	16		

Card 3B

	2	cut out	4	cut out	
	<u>6</u>		8		
	10		12		
	14		16		

Base Card

	1	2	3	4	
	5	<u>6</u>	7	8	
	<u>9</u>	10	11	12	
	13	14	15	16	

Darker practice base card

	1	2	3	4	
	5	<u>6</u>	7	8	
	<u>9</u>	10	11	12	
	13	14	15	16	