

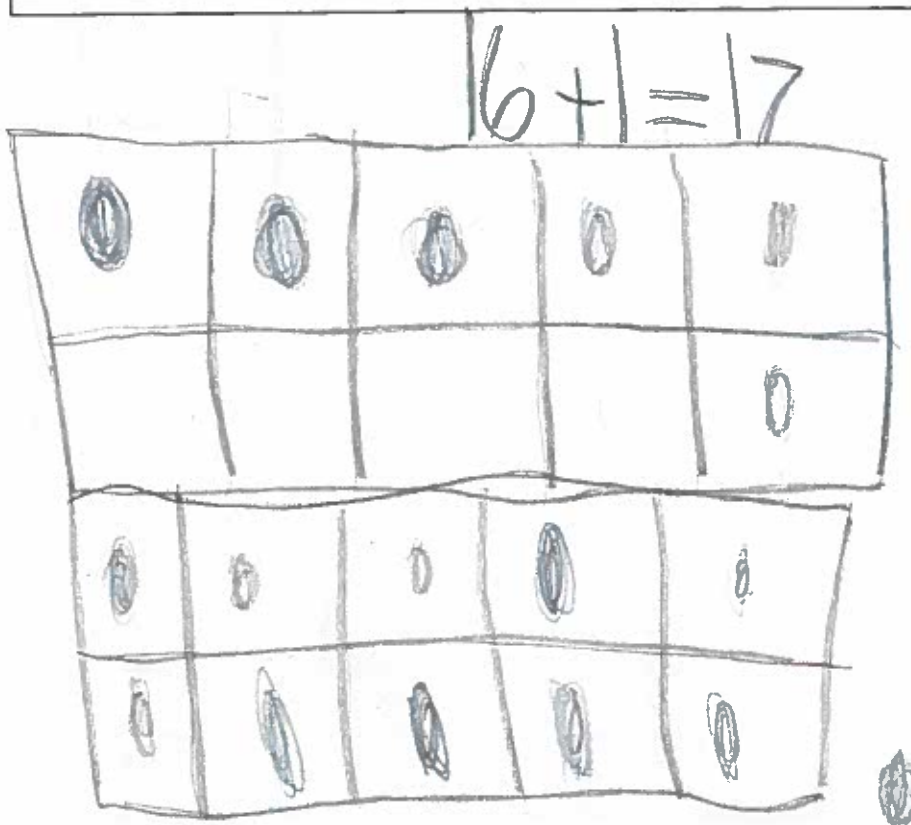
Talking Sticks

Mrs. Holland's class uses talking sticks to call on students throughout the day.

- Each morning, there are 17 sticks in the can.
- As each student shares, their stick is removed from the can and placed on the table. (When the first student shares their stick is moved to the table. When the second student shares their stick is placed on the table.)

If the pattern continues, at any point during the day, how many sticks could be in the can and how many could be on the table?

What are all the possible combinations? How will you know when you have them all?



Teacher note:

Student started from one to build each new solution and had to recount each time to make sure it was 17.

$$24 + 3 = 17$$

| | | | | |
|---|---|---|---|---|
| ● | ● | ● | ● | ● |
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↓

| | | | | |
|---|---|---|---|---|
| ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● |

$$5 + 2 = 7$$

| | | | | |
|---|---|---|--|--|
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Talking Sticks

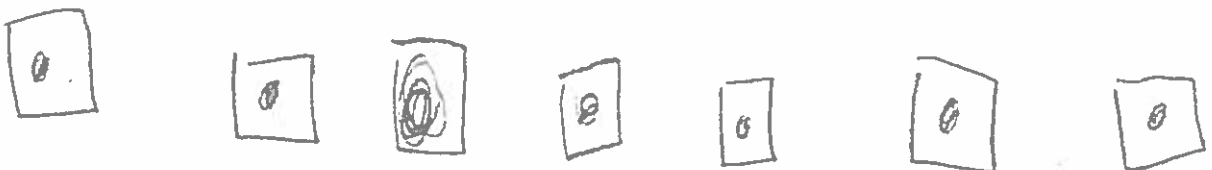
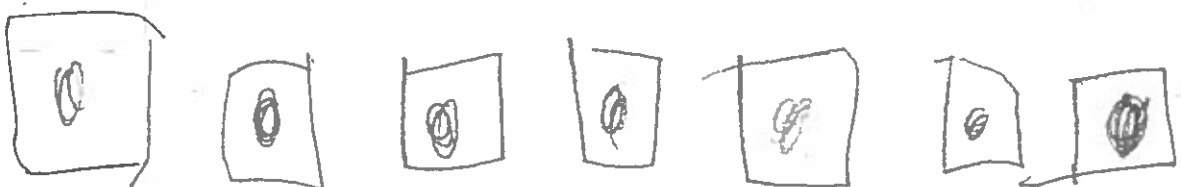
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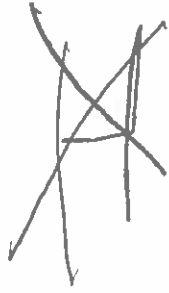
$$16 + 1 = 17$$



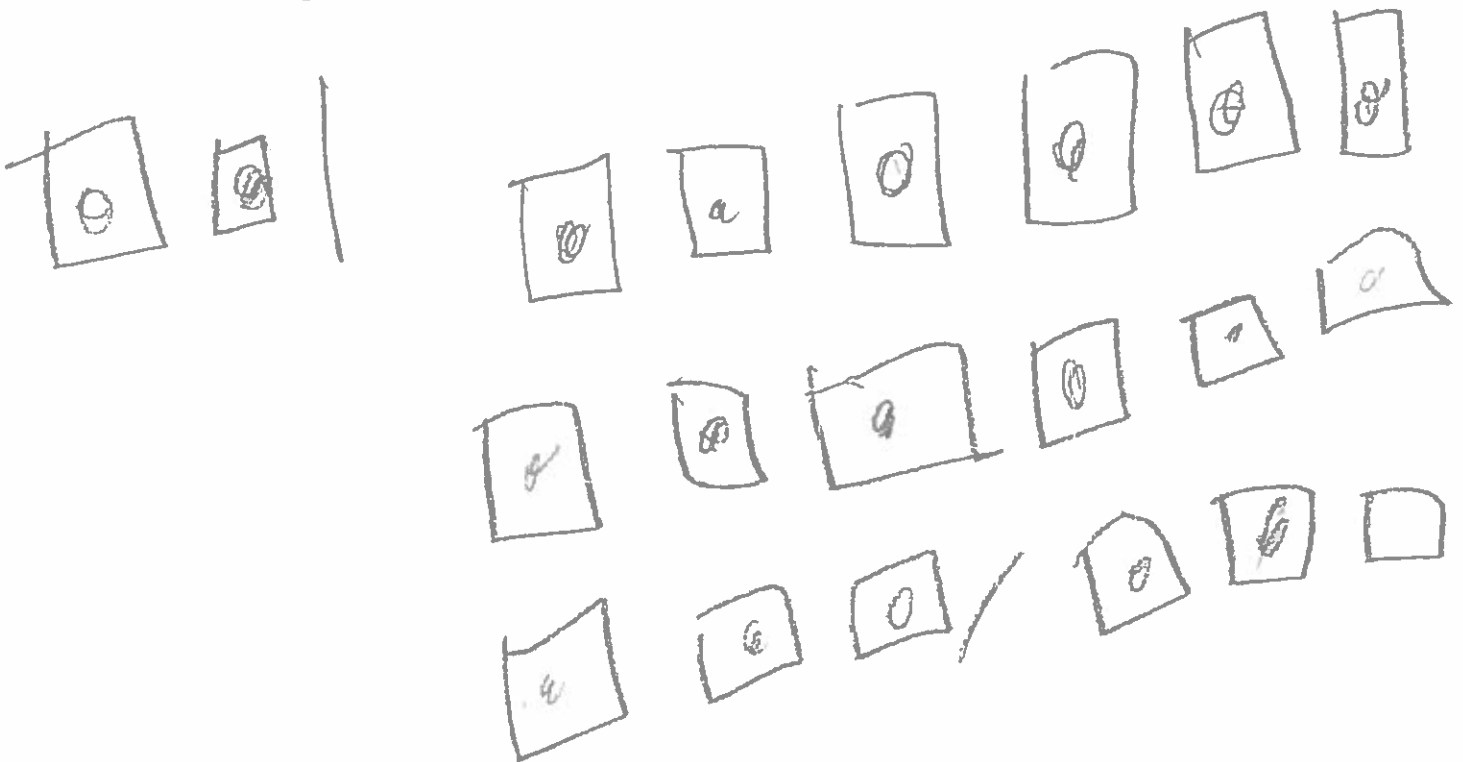
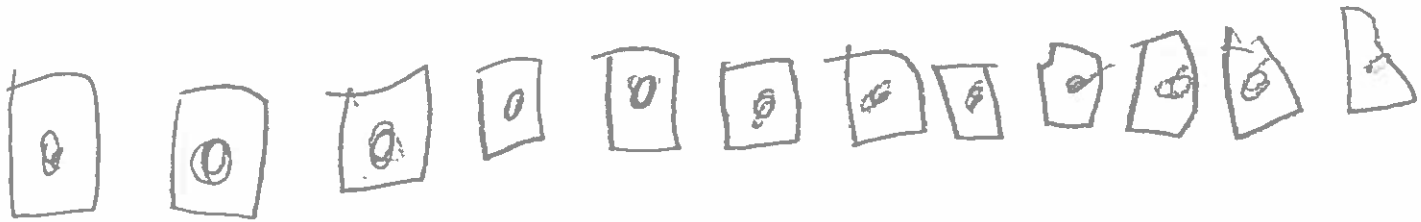
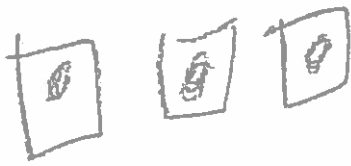
$$1H + \cancel{2} = 17$$

STUDENT B

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$$15 + 2 = 17$$



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$$2 + 15 = 17$$

$$4 + 13 = 17$$

$$17 + 0 = 17$$

$$3 + 14 = 17$$

$$7 + 10 = 17$$

$$18 + 1 = 17$$

$$1 + 16 = 17$$

$$5 + 12 = 17$$

$$6 + 11 = 17$$
~~$$9 + 8 = 17$$~~
~~$$5 + 12 = 17$$~~

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$7 + 10 = 17$ $15 + 2 = 17$
 $8 + 9 = 17$ $16 + 1 = 17$
 $9 + 8 = 17$ $17 + 0 = 17$
 $10 + 7 = 17$
 $11 + 6 = 17$
 $12 + 5 = 17$
 $13 + 4 = 17$
 $14 + 3 = 17$

Talking Sticks

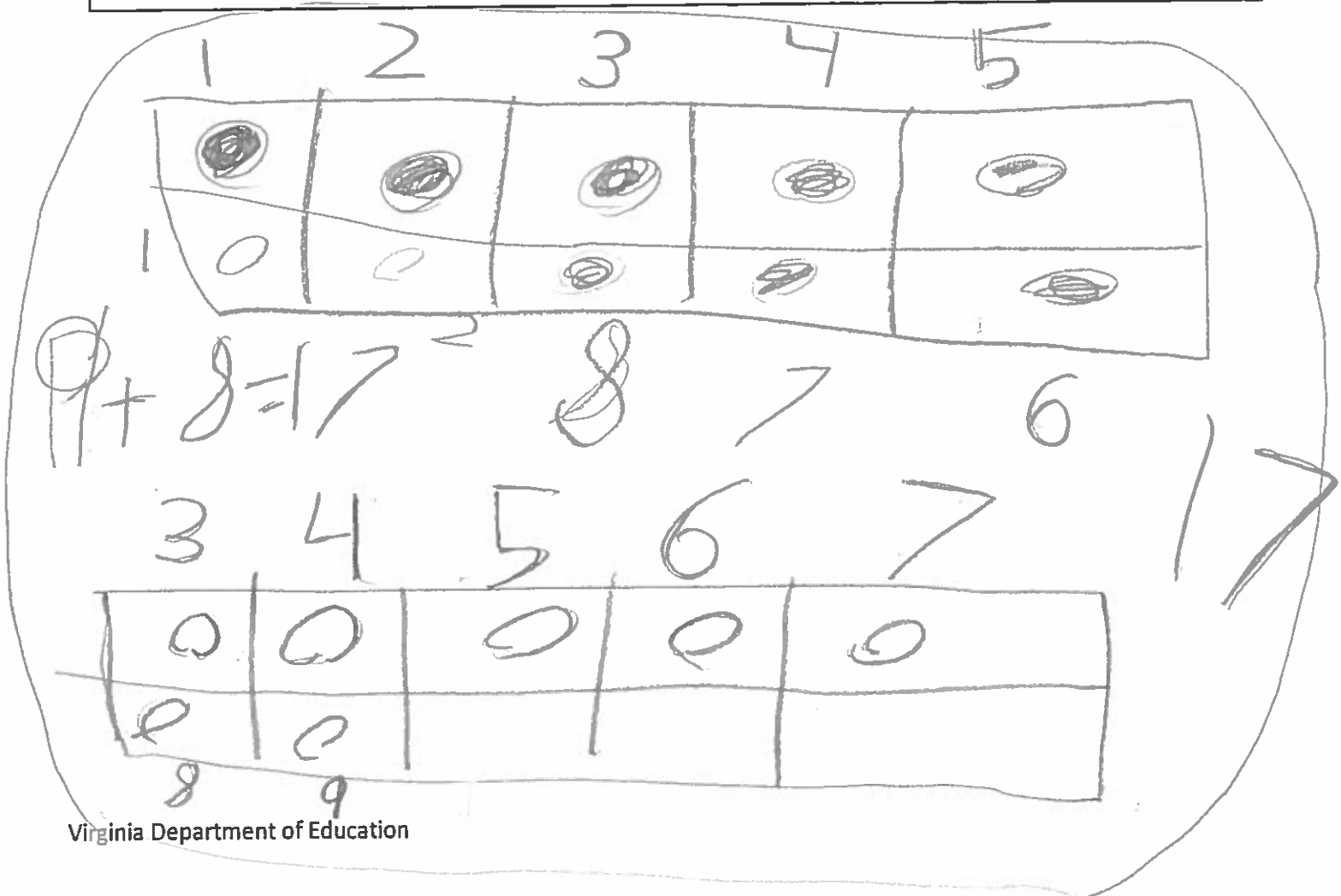
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15
red
0
15
1000



$$10 + 7 = 17$$



$$11 + 6 = 17$$

$$12 + 5 = 17$$

$$13 + 4 = 17$$



$$14 + 3 = 17$$

$$15 + 2 = 17$$



$$16 + 1 = 17$$



$$17 + 0 = 17$$

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$$17 + 0 = 17$$

