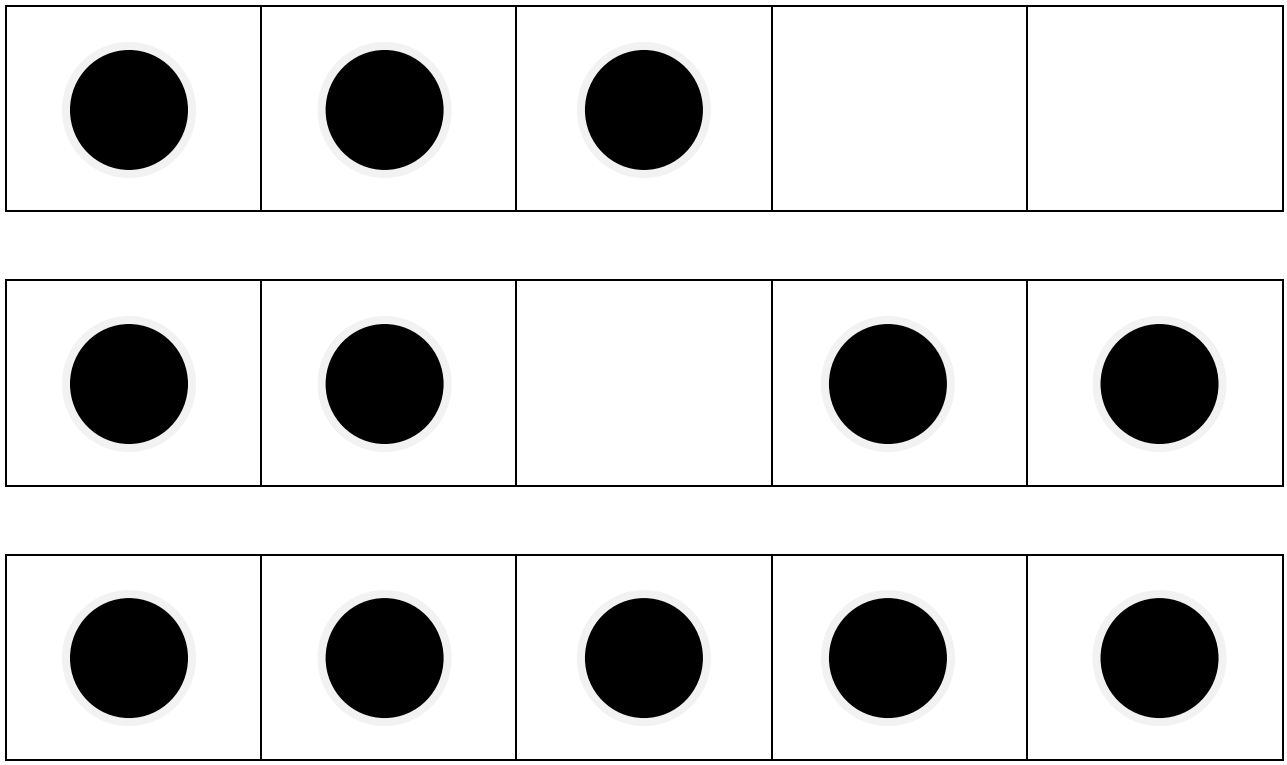
Appendix A: Numeral Cards 0-10

0	1
2	3
4	5
6	7
8	9
10	

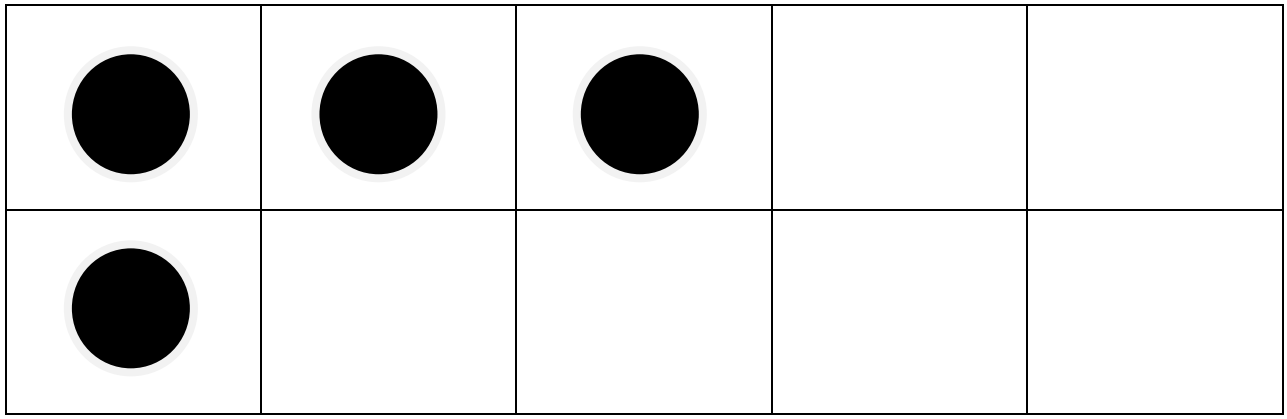
Appendix B: Five Frames

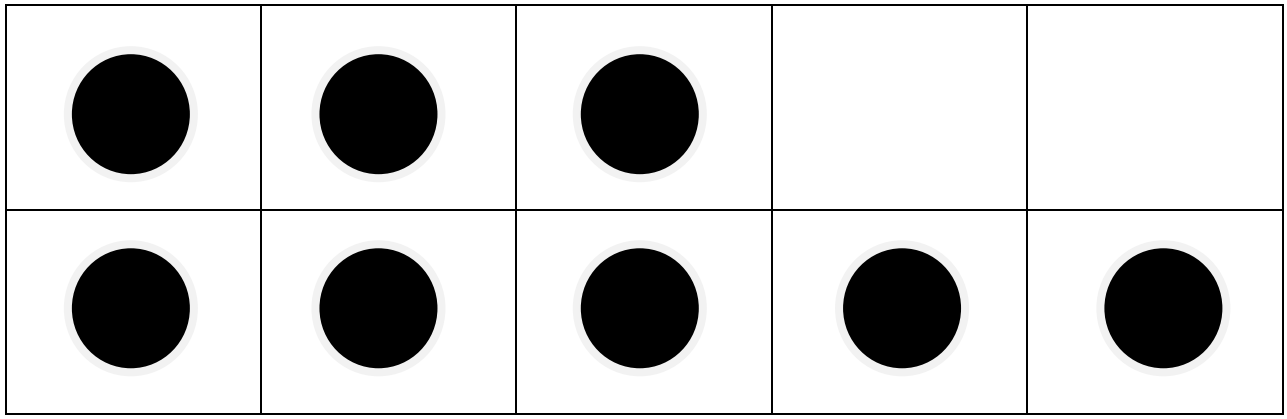


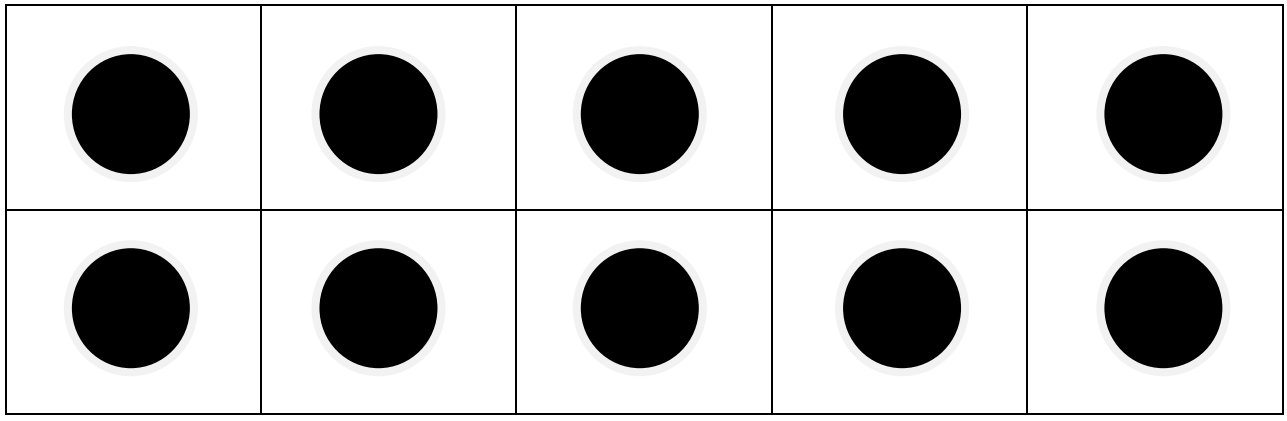
Appendix C: Numeral Cards 11-20

11	12
13	14
15	16
17	18
19	20

Appendix D: Tens Frames





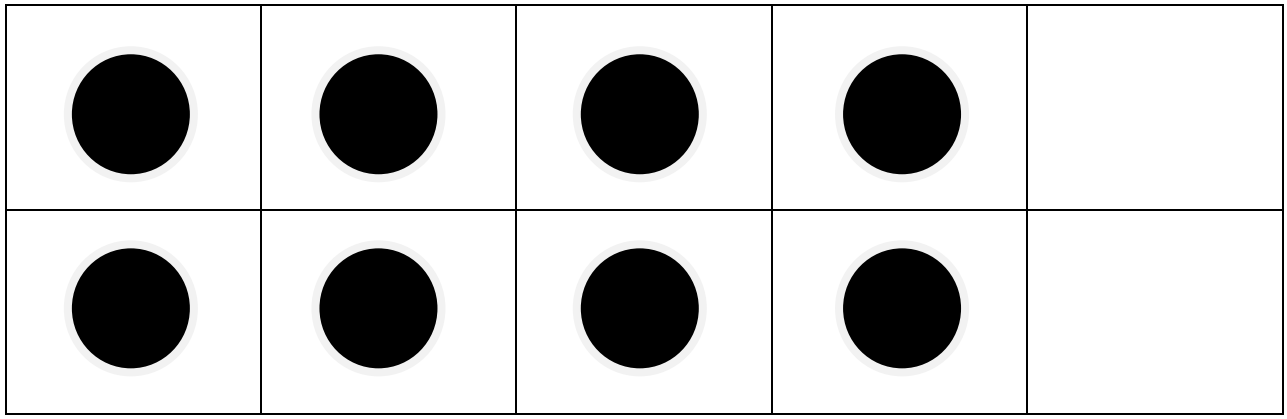


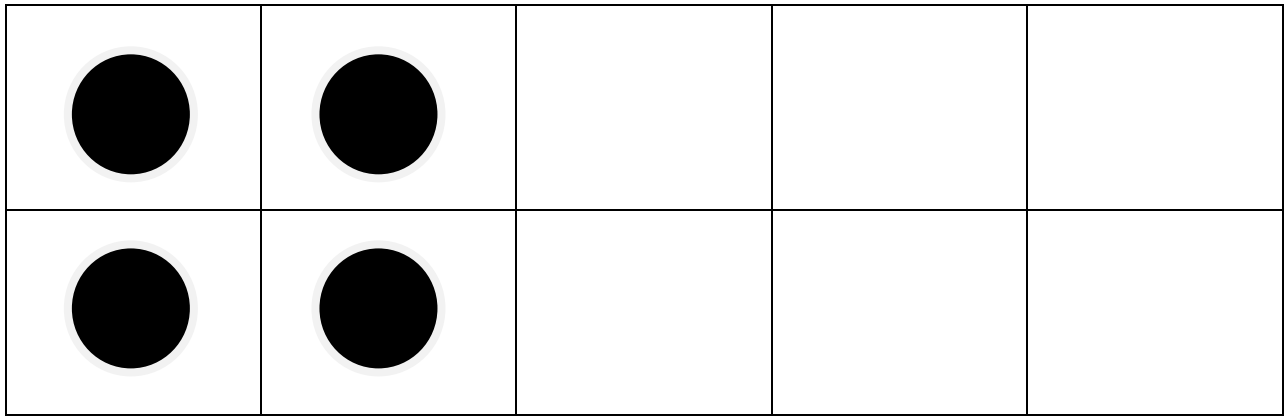
Anthony had 14 counters and Sarah took 7 away. How many counters did Anthony have left?
Sarah had 18 oranges. She gave 9 to her grandmother. How many oranges does Sarah have left?
Adrian received 16 dollars for his birthday. He spent 5 dollars. How many dollars does he have now?
James has 15 baseball cards. He gave 6 cards to his brother. How many baseball cards does he have left?
The cook bought 17 eggs. She cooked 8 of the eggs. How many eggs does the cook have left?

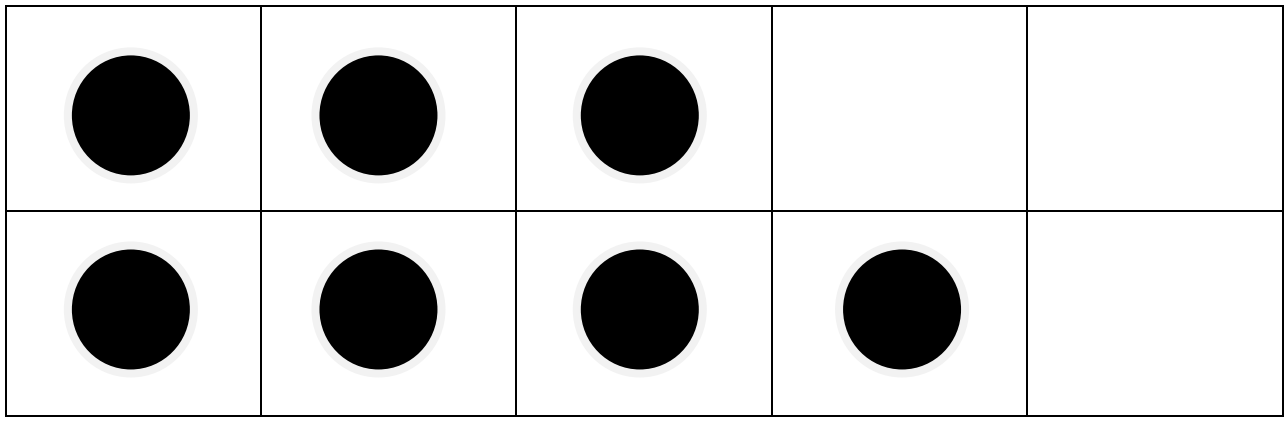
Appendix F: Numeral Cards Stage Three

22	28
31	37
39	40
43	44
46	50

Appendix G: Tens Frames (Doubles)







Appendix H: Fact Cards (Facts within 5, Doubles to 10)

2 + 2	3 + 1	0 + 5
4 + 4	1 + 4	5 + 5
3 + 2	4 + 1	0 + 4
3 + 3	1 + 3	5 + 4
1 + 1	5 + 1	0 + 3
2 + 5	3 + 4	5 + 2

Appendix I: Stage Three Number Strategy Cards

8 + 5
9 + 2
3 + 5
4 + 7
2 + 6

You have 19 lollipops, and you eat 7 of them. How many lollipops do you have left?
You have 17 dollars, and you spend 6 dollars. How many dollars do you have left?
You saw 18 kangaroos and then 5 of them hopped away. How many kangaroos were left?
You have 16 ladybugs but 4 of them fly away. How many ladybugs are left?
You have 14 cookies and you give 5 away to friends. How many cookies do you have left?

There are 10 pieces of gum in a pack. If Dion has 3 packs and Ted has 2 packs, how many pieces of gum do they have altogether?
There are 10 pieces of gum in a pack. If Samantha had 5 packs of gum and gave 4 packs of gum to Jane, how many pieces of gum would Samantha have left?
There are 10 pieces of candy in a pack. If Lindsay has 5 packs and Sherri has 4 packs, how many pieces of candy do they have altogether?
There are 10 pieces of candy in a pack. If Susan had 7 packs of candy and gave 3 packs of candy to Erin, how many pieces of candy would Susan have left?
There are 10 strawberries per box. If Lisa has 6 boxes and Jolie has 2 boxes, how many strawberries do they have altogether?

There are 10 apples per bag. If Cindy had 8 bags of apples and gave 1 bag of apples to Joyce, how many apples would Cindy have left?
There are 10 bottles of water per case. If Kim has 5 cases and Debbie has 2 cases, how many bottles of water do they have altogether?
There are 10 pies per box. If George had 6 boxes of pies and gave 3 boxes of pies to Ed, how many pies would George have left?
There are 10 canaries per cage. If Janet has 3 cages and Teresa has 4 cases, how many canaries do they have altogether?
There are 10 fish in each fish bowl. If Tonya had 3 fish bowls and sold 2 fish bowls to Jack, how many fish would Tonya have left?

Appendix L: Numeral Cards Stage Four

45	48
51	53
58	59
63	67
69	70
73	80

85	91
94	95
99	100

Appendix M: Fact Cards (Facts to 10, including the teen facts)

5 + 4	7 + 1	0 + 6
3 + 10	10 + 8	2 + 2
6 + 2	8 + 1	0 + 5
4 + 10	10 + 7	3 + 3
7 + 3	6 + 1	0 + 2
5 + 10	10 + 4	4 + 4

5 + 3	4 + 1	0 + 3
6 + 10	10 + 6	5 + 5
4 + 5	5 + 1	0 + 4
7 + 10	10 + 5	1 + 1

Donald has 14 oranges. He buys 8 more. How many oranges does he have now?
Aiesha found 32 beads. Dante found 11 more. How many beads do they have altogether?
Regina has 17 stickers. She buys 9 more. How many stickers does she have now?
Jessica found 43 seashells. Melissa found 12 more. How many seashells do they have altogether?
Stan has 15 baseball cards. He buys 8 more. How many baseball cards does he have now?

There are 53 people on the bus. 16 people get off. How many people are left on the bus?

There are 47 pets in the pet store. 14 pets are sold to customers. How many pets are left in the pet store?

Hugo saw 38 ducks in the pond. He saw 17 fly away. How many ducks are left in the pond?

Alex received $62 for his birthday. He spent $13 on a toy. How much money does Alex have left?

Fred had 58 toy cars. He gave his best friend 12 of his cars. How many toy cars does Fred have left?

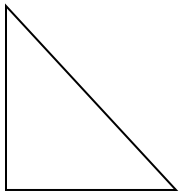
Ali collected 13 marbles. Her grandma gave her 50 more for her birthday. How many marbles does Ali have now?
Jim planted 46 flowers. Only 10 of them bloomed. How many flowers did not bloom?
Sam received 17 dollars. His aunt gave him 60 more dollars for Christmas. How many dollars does Sam have now?
Julie counted 32 birds in the tree. Suddenly some of them flew away and only 10 were left. How many birds flew away?
Tracy invited 19 friends to her wedding. Tracy's mother invited 40 more people to the wedding. How many people were invited to the wedding in all?

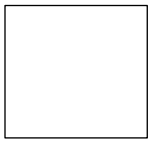
Jackie had 83 dollars in her jacket pocket in the morning. At the end of the day she counted her money and had 30 dollars. How much money did she spend that day?
The mother bird collected 18 worms. The father bird collected 30 worms. How many worms did they collect in all?
Mrs. Jones baked 36 cookies for her sewing club meeting. After the meeting there were 20 cookies left. How many cookies were not eaten?
Ethan read 16 pages on Monday and 50 pages on Tuesday. How many pages did he read in all on those two days?
Donald had 44 trees in his back yard before a big storm hit. After the storm, there were 30 trees still standing. How many trees were knocked down?

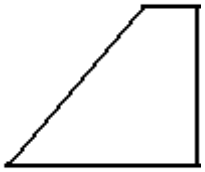
In each bowl there are five apples. Edward has three bowls. How many apples does he have?
On each page there are six stickers. Sally has four pages. How many stickers does she have?
Each momma cat has four kittens. There are three momma cats. How many kittens are there?
On each plate there are three slices of pizza. There are seven plates. How many slices of pizza are there?
Mr. Smith ran five miles each day. He ran for eight days. How many miles did he run in all?

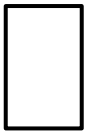
There are 20 lollipops. If two people are sharing them, how many lollipops would each person get?
There are 21 flowers. If three people share them, how many flowers would each person get?
There are 45 pieces of candy. If 9 people are sharing them, how many pieces of candy will each person get?
There are 32 chairs. If eight tables share them, how many chairs will each table get?
There are 18 pencils. If six students share them, how many pencils will each student get?

Appendix S: Stage Four Number Strategy Cards - Fractions





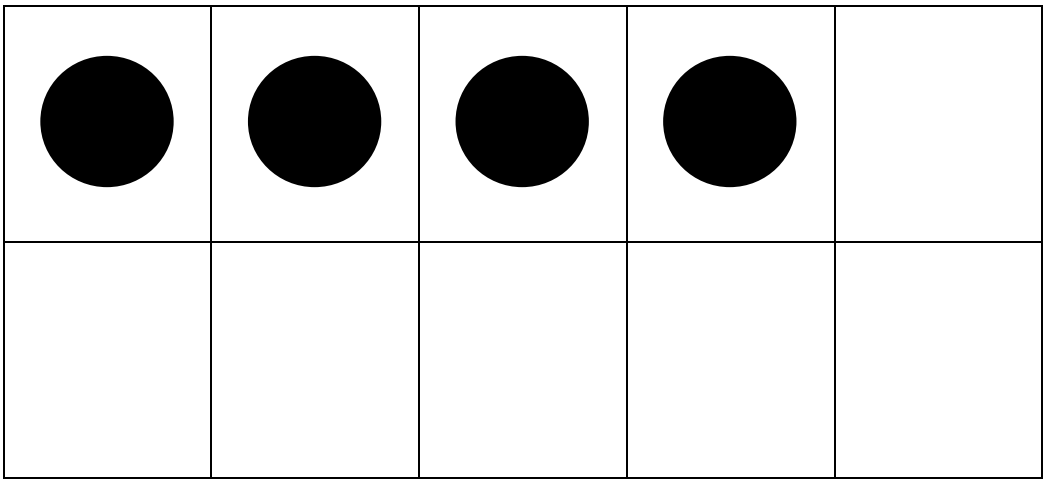


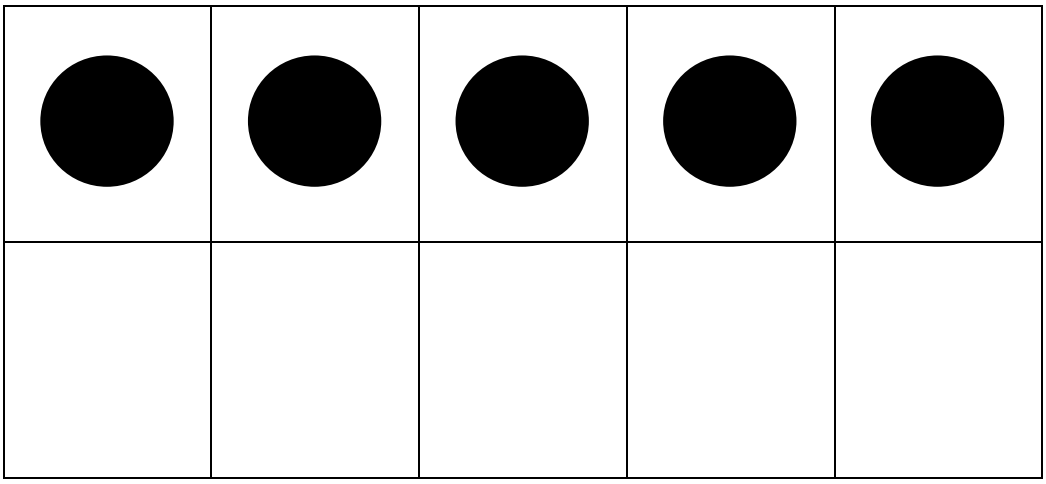


705	432
999	321
657	990
210	513
893	101
411	997
650	209
1,000	

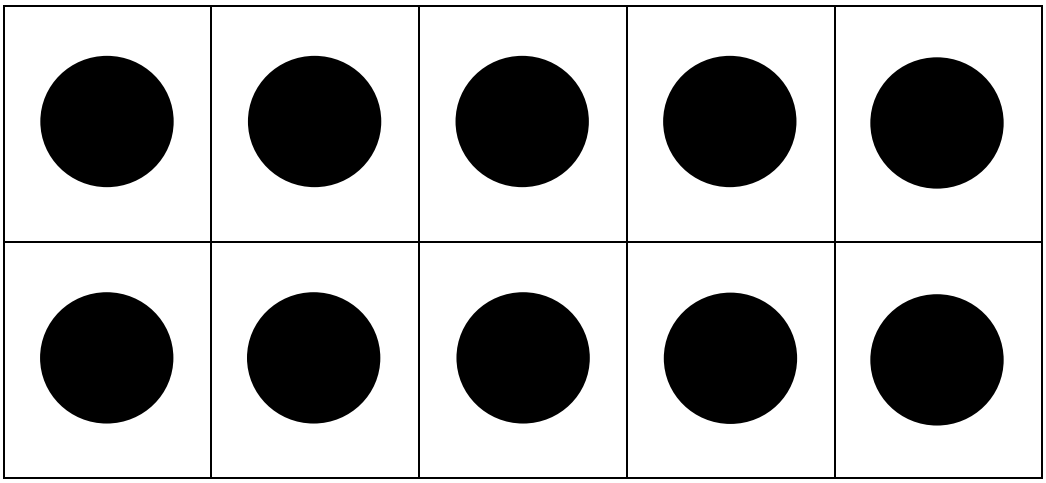
$\frac{1}{2}$	$\frac{3}{4}$
$\frac{2}{3}$	$\frac{3}{5}$
$\frac{6}{10}$	$\frac{5}{4}$
$\frac{3}{2}$	$\frac{10}{5}$
$\frac{11}{10}$	$\frac{5}{3}$

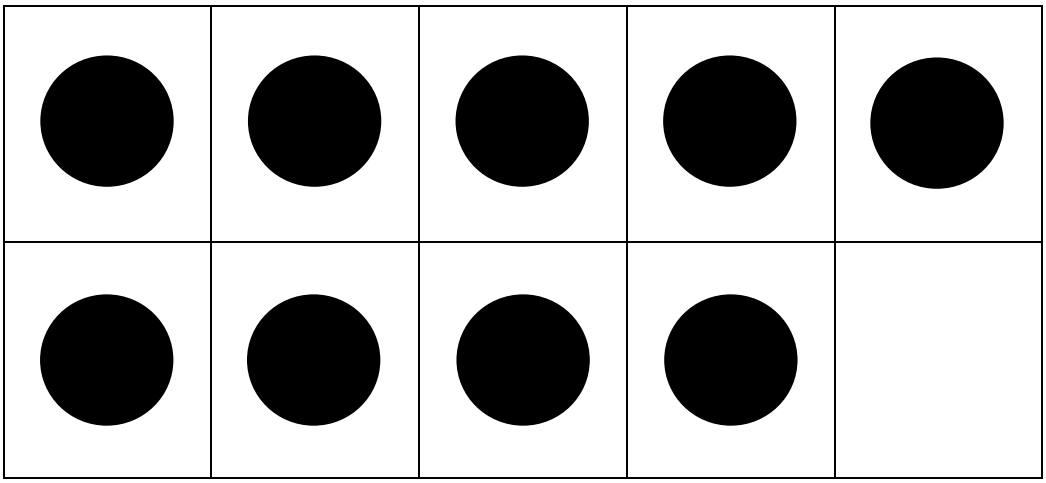
APPENDIX V: Using doubles to solve addition problems - Stage 5 (BL)



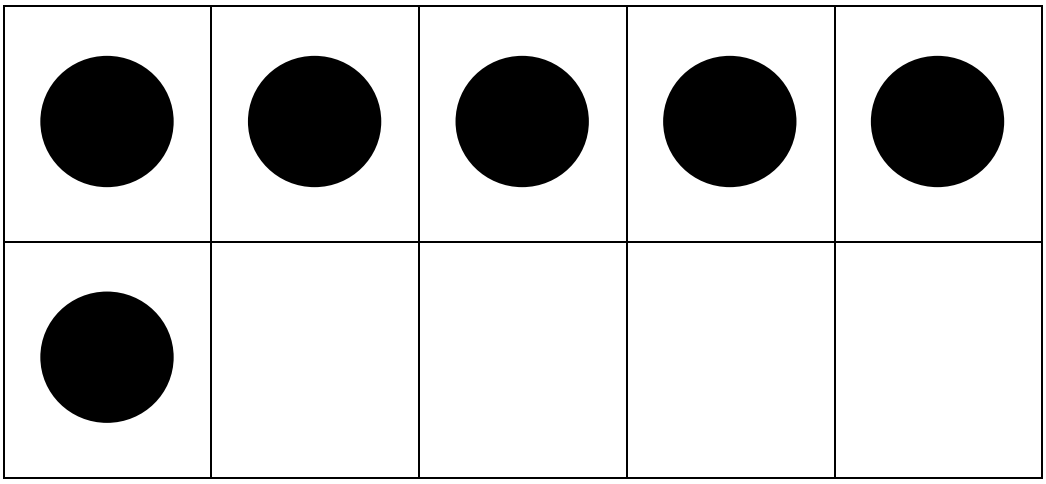


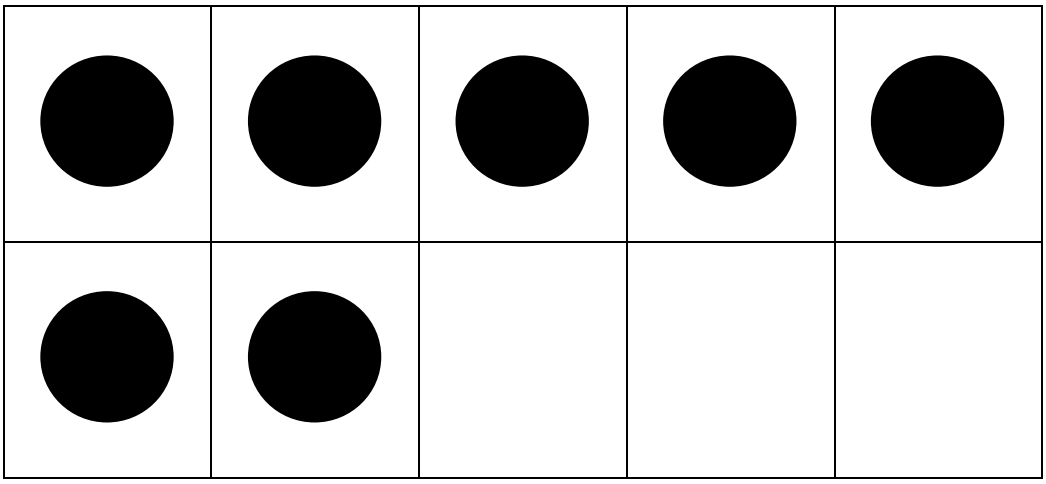
APPENDIX V: Using doubles to solve addition problems - Stage 5 (DP1)



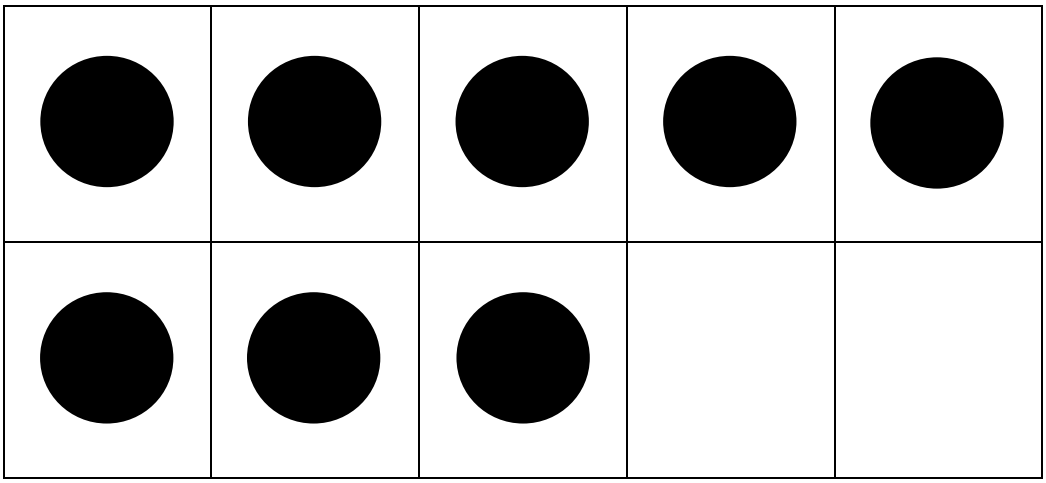


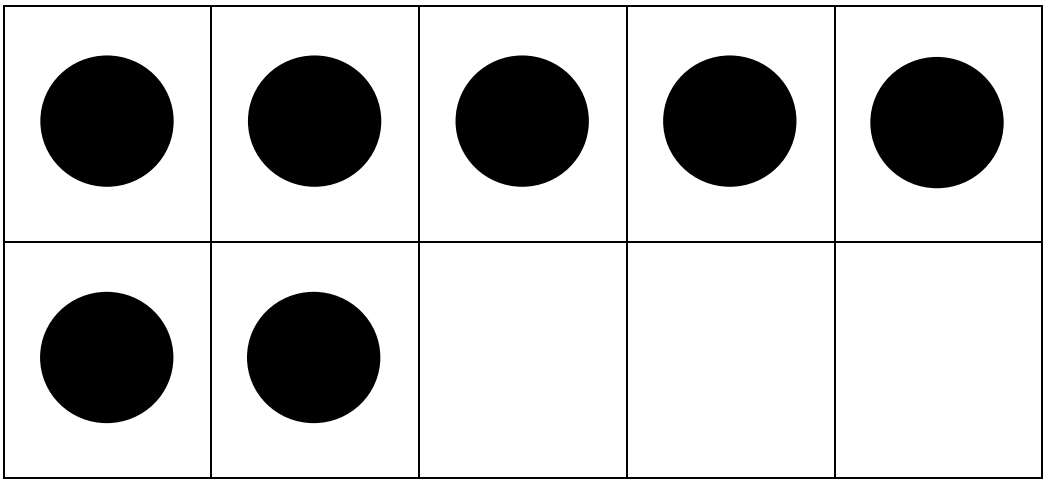
APPENDIX V: Using doubles to solve addition problems - Stage 5 (DP 2)



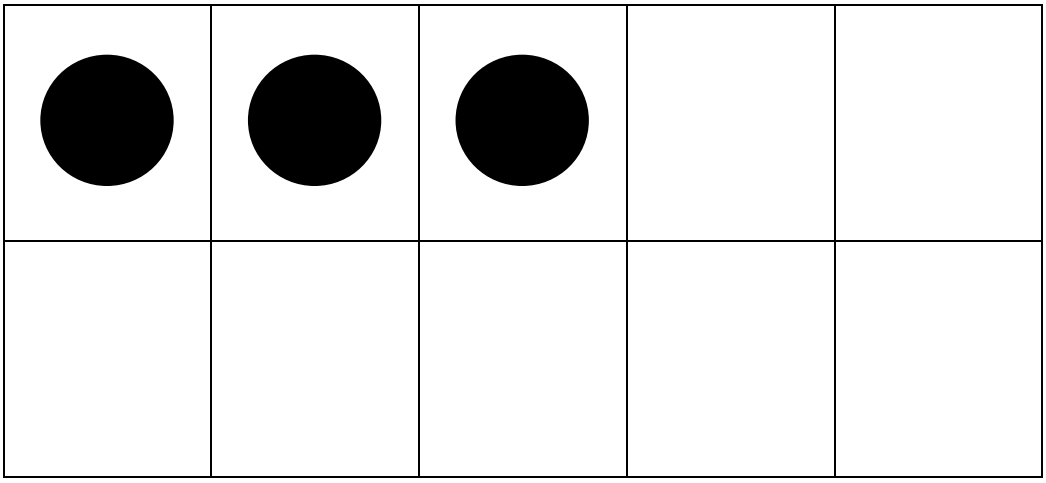


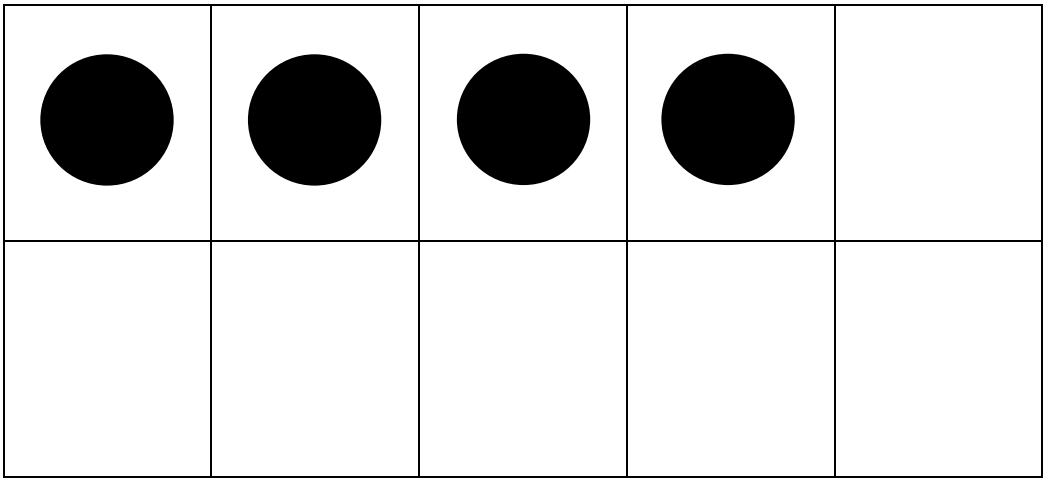
APPENDIX V: Using doubles to solve addition problems - Stage 5 (DP 3)





APPENDIX V: Using doubles to solve addition problems - Stage 5 (DP 4)





13 – 6 = ☐
11 – 5 = ☐
15 – 7 = ☐
17 – 8 = ☐
19 - 9 = ☐

5 + 2 + 5 - 10 =	
9 + 5 + 1 - 6 =	
7 + 8 + 2 - 9 =	
2 + 6 + 4 + 3 - 7 =	
4 + 6 + 4 + 3 - 7 =	

There were 28 books on the shelf. Benji added 11 more books. How many books are on the shelf
There are 16 girls on the playground. Then 38 boys come out to the playground. How many students are on the playground?
There are 23 fish in the aquarium. Mr. Caron buys 27 fish to add to the aquarium. How many fish are in the aquarium?
Kiersten saw 17 ducks swimming in the lake and 35 ducks flying above the lake. How many ducks did Kiersten see in all?
In the morning 74 cars drove over the bridge. In the afternoon 47 cars drove over the bridge. How many cars drove over the bridge in all that day?

Gracie counted 63 chocolate bars. After lunch she noticed that 36 had melted. How many chocolate bars did not melt?
Terence planted 48 flowers in the flower bed. After a week of no rain 27 died. How many live flowers does he have left?
Debbie took 83 cupcakes to the bake sale. She sold 59 cupcakes. How many cupcakes did Debbie have left?
Juli the librarian received 64 books for the library. Students came and checked out 29 books. How many books were left?
Richie picked 71 blackberries. He ate 38 of them. How many blackberries does he have left?

Yasmine ran 28 miles so far. She wants to run a total of 81 miles by the end of the year. How many more miles does she need to run?
Jacob picked 16 strawberries. He then picked 42 more. How many strawberries did Jacob pick?
Graham's football team earned 17 points in the first half of the game. At the end of the game, the teamed earned a total of 34 points. How many points did they earn during the second half?
A copy machine makes 58 copies on Monday and 33 copies on Tuesday. How many copies did the machine make on both days?
Daniel read 69 pages in his book. To finish the book he would have to read 41 more. How many pages are in Daniel's book?

The bleachers at the soccer field had 3 rows. Each row had 6 seats. How many seats are there?
The strawberry field has 2 rows of strawberries. In each row, there are 8 strawberries. How many strawberries are in the field?
Ms. Jones' classroom has 4 rows of desks. Each row has 7 desks. How many desks are in Ms. Jones' classroom?
The trees at the apple orchard are in 5 rows. There are 2 trees in each row. How many trees are in the orchard?
An ice cube tray has 2 rows of ice cubes. Each row has 9 ice cubes. How many ice cubes are in each tray?

Use your knowledge of the doubling and halving strategy to solve the problem. Joe has 5 packs of 6 cokes. How many cokes does Joe have?
Use your knowledge of the doubling and halving strategy to solve the problem. Michael has 5 packs of t-shirts. Each pack has 4 t-shirts. How many t-shirts does Michael have?
Use your knowledge of the doubling and halving strategy to solve the problem. Krystal has 5 packs of 8 juice boxes. How many juice boxes does Krystal have?
Use your knowledge of the doubling and halving strategy to solve the problem. Meghan has 5 packs of peanut butter cups. Each pack has 2 peanut butter cups. How many peanut butter cups does Meghan have?
Use your knowledge of the doubling and halving strategy to solve the problem. Mollie has 5 bunches of 4 apples. How many apples does Mollie have?

There are 8 cows. One fourth of the cows need to be placed in the barn. How many cows will be placed in the barn?
There are 10 lady bugs. One fifth of the lady bugs sit on each leaf. How many lady bugs sit on each leaf?
Terrance had 20 jellybeans. He gave one tenth of his jelly beans to each friend. How many jellybeans did each friend receive?
There were 12 students in the class. One third of the students were wearing stripes. How many students were wearing stripes?
Kayla had 14 pens. She gave half of her pens to Casey. How many pens does Kayla have left?

Three people are sharing one sub sandwiches. How much of the sub sandwich will each person get to eat?
Four people are sharing five sub sandwiches. How much of the sub sandwiches will each person get to eat?
Two people are sharing one sub sandwich. How much of the sub sandwich will each person get to eat?
Two people are sharing three sub sandwiches. How much of the sub sandwich will each person get to eat?
Three people are sharing four sub sandwiches. How much of the sub sandwich will each person get to eat?