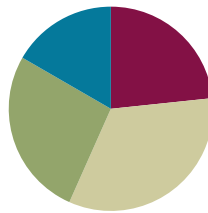# Lesson 1

Objective: Use manipulatives to create equal groups.

Suggested Lesson Structure

■ Fluency Practice   (14 minutes)
■ Concept Development   (20 minutes)
■ Application Problem   (16 minutes)
■ Student Debrief   (10 minutes)
   Total Time   **(60 minutes)**

Fluency Practice (14 minutes)

▪ Grade 2 Core Fluency Practice Sets **2.OA.2**   (5 minutes)
▪ Get the Ten Out and Subtract **2.NBT.5**   (5 minutes)
▪ Subtract Common Units **2.NBT.5, 2.NBT.7**   (4 minutes)

Grade 2 Core Fluency Practice Sets (5 minutes)

Materials: (S) Core Fluency Practice Sets

Note: During Topic A and for the remainder of the year, each day's Fluency Practice includes an opportunity for review and mastery of the sums and differences with totals through 20 by means of the Core Fluency Practice Sets or Sprints. Five options are provided in this lesson for the Core Fluency Practice Set, with Set A being the simplest and Set E the most complex. Start all students on Set A.

Students complete as many problems as they can in 120 seconds. One hundred percent accuracy and completion is recommended before moving to the next level. Collect any Practice Sets that have been completed within the 120 seconds, and check the answers. The next time Core Fluency Practice Sets are used, students who have successfully completed their set can move on to the next level. Keep a record of student progress.

Consider assigning early finishers a counting pattern and start number (e.g., count by fives from 195). Celebrate improvement as well as advancement. Students should be encouraged to compete with themselves rather than their peers. Discuss with students possible strategies to solve. Notify caring adults of each student's progress.

Get the Ten Out and Subtract (5 minutes)

Note: Students practice taking out the ten and subtracting.

- T: For every expression I give, subtract the ones from ten. When I say, "12 – 4," you say, 10 – 4 = 6. Ready?
- T: 12 – 4.
- S: 10 – 4 = 6.
- T: 13 – 7.
- S: 10 – 7 = 3.

Students practice taking the ten out of expressions fluently before adding the ones back.

- T: Now, let's add back the ones.
- T: 12 – 4. Take from ten.
- S: 10 – 4 = 6.
- T: Now, add back the ones.
- S: 6 + 2 = 8.

Continue with the following possible sequence: 13 – 7, 11 – 8, 13 – 9, 15 – 7, and 14 – 8.

Subtract Common Units (4 minutes)

Materials: (S) Personal white board

Note: This activity reminds students of the importance of the subtraction algorithm.

- T: (Project 88.) Say the number in unit form.
- S: 8 tens 8 ones.
- T: (Write 88 – 22 = _____.) Say the subtraction sentence and answer in unit form.
- S: 8 tens 8 ones – 2 tens 2 ones = 6 tens 6 ones.
- T: Write the subtraction sentence in standard form on your personal white board.

Continue with the following possible sequence: 66 – 33, 99 – 22, 299 – 22, 77 – 33, and 777 – 33.

Concept Development (20 minutes)

Materials: (T) Sentence frame: There are ____ groups of ____ counters. (S) 12 counters

This lesson prepares students to express equal groups as equal addends in Lesson 2. Throughout the lesson, circulate to check for understanding as students move their counters.

- T: (Show 6 counters separated into 3 groups of 2.) Talk with your partner: Are these groups equal or unequal, and how do you know?
- S: They're equal because there's the same number of counters in each group. → They're equal because there are 2 in each group.

EUREKA
MATH™

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

T: (Rearrange the counters to show 4 in one group and 2 in another.) Talk again. Equal or unequal?

S: Unequal. There are 4 in one group and 2 in the other. → They're unequal because they don't have the same amount in each group.

T: So, for groups to be equal, they need to have the same number in each. True?

S: True!

T: Take 8 counters, and move them into groups of 2.
     (Give students time to organize their groups.)

T: How many groups of 2 are there? Use the sentence
     frame: There are ___ groups of ___ counters.

S: There are 4 groups of 2 counters.

T: Now, make groups of 4 counters. (Pause.) How many
     groups of 4 are there?

S: There are 2 groups of 4 counters.

T: Now, use all of your counters, and find a way to arrange them
     into equal groups. (Give students time to organize their counters.)

T: Who would like to share how they organized their counters?

S: I made 2 groups and put 6 in each. → I put 4 in each group, and there are 3 groups.
     → I made 6 groups of 2. → I made 4 groups of 3 counters.

T: So, there can be more than one way to make equal groups. Try arranging your counters another
     way. (Give students time to try another way.)

T: Use the sentence frame to tell your partner how many counters are in each group.

S: (Turn and talk.) There are _____ groups of _____ counters.

T: Set 2 counters aside. Make groups of 5.

S: (Move counters.)

T: How many groups did you make? Use the sentence frame.

S: There are 2 groups of 5 counters.

T: Now, make groups of 2. Use the sentence frame.

S: There are 5 groups of 2 counters.

T: Now, let's try something different. (Draw or project 3 groups
     with 3, 5, and 4 counters, respectively.)

T: Arrange all of your counters to look like mine.

T: Are these groups equal?

S: No!

T: Move your counters to make the 3 groups equal.

T: How did you make the groups equal?

S: I moved one counter from the group that has 5 to the group
     that has 3. Now there are 4 counters in each group.
     → I looked for the group with the most, and I moved one
     counter to the group with the least. Now there are equal
     groups of 4.

> **NOTES ON
> MULTIPLE MEANS
> OF ENGAGEMENT:**
>
> Have students show equal groups by
> grouping themselves into groups of 4,
> 5, and so on. This activity can be done
> outdoors as well.

**EUREKA
MATH**™

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

T: Yes! We made 3 groups of 4.

T: Move your counters to form 2 equal groups. (Pause.)

T: How many counters are in the 2 groups? Use the sentence frame.

S: There are 2 groups of 6 counters.

T: How did you figure that out?

MP.8

S: (Demonstrate.) I moved one counter here and one counter here, and I kept doing that until all the counters were in 2 groups. → I made rows and matched the counters, so there was the same number in each row. → I split the counters in half.

T: Ooh! I like that! What addition fact helped you know that?

S: 6 + 6 = 12.

T: Nice mental work!

> **NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:**
>
> Some students may put all 12 counters into one group. Support the fact that this is one way to make a group. Then, encourage these students to show equal groups, too.

Application Problem (16 minutes)

Julisa has 12 stuffed animals. She wants to put the same number of animals in each of her 3 baskets.

a.   Draw a picture to show how she can put the animals into 3 equal groups.

b.   Complete the sentence.

Julisa put ____ animals in each basket.

Julisa put 4 animals in each basket.

Note: This problem is intended for independent practice. It follows the Concept Development so students can apply the day's learning in a real world context. The allotted time period includes 6 minutes to solve the Application Problem and 10 minutes to complete the Problem Set.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. Some problems do not specify a method for solving. This is an intentional reduction of scaffolding that invokes MP.5, Use Appropriate Tools Strategically. Students should solve these problems using the RDW approach used for Application Problems.

For some classes, it may be appropriate to modify the assignment by specifying which problems students should work on first. With this option, let the purposeful sequencing of the Problem Set guide the selections so that problems continue to be scaffolded. Balance word problems with other problem types to ensure a range of practice. Consider assigning incomplete problems for homework or at another time during the day.

EUREKA MATH™

Lesson 1:   Use manipulatives to create equal groups.

engage^ny

14

Student Debrief (10 minutes)

Lesson Objective: Use manipulatives to create equal groups.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- For Problem 1, how many groups of 2 did you circle? How many apples are there altogether? What counting strategies did you use?
- For Problem 2, how many groups of 3 did you circle? If you were circling groups of 5 balls, would there be more or fewer groups?
- For Problems 3 and 4, what steps did you take to redraw the oranges into 4 equal groups? When you drew the oranges into 3 equal groups, did you put more or fewer oranges in each group? Could you make 5 equal groups? Six equal groups?
- For Problem 5, how did you go about making the three groups equal?
- Make a prediction: How are these equal groups related to addition?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

Name _____   Date _____

1.	10 + 3 =	21.	7 + 9 =
2.	10 + 6 =	22.	4 + 8 =
3.	10 + 4 =	23.	5 + 9 =
4.	5 + 10 =	24.	8 + 6 =
5.	8 + 10 =	25.	7 + 5 =
6.	10 + 9 =	26.	5 + 8 =
7.	12 + 2 =	27.	8 + 3 =
8.	13 + 4 =	28.	9 + 8 =
9.	16 + 3 =	29.	6 + 5 =
10.	2 + 17 =	30.	7 + 6 =
11.	5 + 14 =	31.	4 + 6 =
12.	7 + 12 =	32.	8 + 7 =
13.	16 + 3 =	33.	7 + 7 =
14.	11 + 5 =	34.	8 + 6 =
15.	9 + 2 =	35.	6 + 9 =
16.	5 + 9 =	36.	8 + 5 =
17.	7 + 9 =	37.	4 + 7 =
18.	9 + 4 =	38.	3 + 9 =
19	7 + 8 =	39.	6 + 6 =
20.	8 + 8 =	40.	4 + 9 =

EUREKA MATH™

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

16

Name _____   Date _____

1.	10 + 4 =	21.	4 + 8 =
2.	10 + 9 =	22.	7 + 6 =
3.	5 + 10 =	23.	_____ + 4 = 11
4.	2 + 10 =	24.	_____ + 8 = 13
5.	11 + 4 =	25.	6 + _____ = 14
6.	12 + 5 =	26.	8 + _____ = 15
7.	16 + 2 =	27.	_____ = 9 + 8
8.	13 + _____ = 18	28.	_____ = 4 + 7
9.	11 + _____ = 20	29.	_____ = 7 + 8
10.	14 + 3 =	30.	3 + 9 =
11.	_____ = 3 + 16	31.	6 + 7 =
12.	_____ = 7 + 12	32.	8 + _____ = 13
13.	_____ = 15 + 4	33.	_____ = 7 + 9
14.	9 + 2 =	34.	6 + 5 =
15.	6 + 9 =	35.	_____ = 5 + 7
16.	_____ + 4 = 11	36.	_____ = 8 + 4
17.	_____ + 6 = 13	37.	15 = 8 + _____
18.	_____ + 5 = 12	38.	17 = _____ + 9
19	8 + 8 =	39.	14 = _____ + 7
20.	6 + 6 =	40.	19 = 8 + _____

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

Name _____   Date _____

1.	12 – 2 =	21.	16 – 9 =
2.	18 – 8 =	22.	14 – 6 =
3.	19 – 10 =	23.	16 – 8 =
4.	14 – 10 =	24.	15 – 6 =
5.	16 – 6 =	25.	17 – 8 =
6.	11 – 10 =	26.	18 – 9 =
7.	17 – 12 =	27.	15 – 7 =
8.	20 – 10 =	28.	13 – 8 =
9.	13 – 11 =	29.	11 – 3 =
10.	18 – 13 =	30.	12 – 5 =
11.	12 – 3 =	31.	11 – 2 =
12.	11 – 2 =	32.	13 – 6 =
13.	14 – 2 =	33.	16 – 7 =
14.	13 – 4 =	34.	12 – 8 =
15.	11 – 3 =	35.	16 – 13 =
16.	13 – 2 =	36.	15 – 14 =
17.	12 – 4 =	37.	17 – 12 =
18.	14 – 5 =	38.	19 – 16 =
19	11 – 4 =	39.	18 – 11 =
20.	12 – 5 =	40.	20 – 16 =

Name _____   Date _____

1.	19 – 9 =	21.	16 – 7 =
2.	12 – 10 =	22.	17 – 8 =
3.	18 – 11 =	23.	16 – 7 =
4.	15 – 10 =	24.	14 – 8 =
5.	17 – 12 =	25.	17 – 9 =
6.	16 – 13 =	26.	12 – 9 =
7.	12 – 2 =	27.	16 – 8 =
8.	20 – 10 =	28.	15 – 7 =
9.	14 – 11 =	29.	13 – 8 =
10.	13 – 3 =	30.	14 – 7 =
11.	_____ = 11 – 3	31.	13 – 9 =
12.	_____ = 14 – 4	32.	15 – 9 =
13.	_____ = 13 – 4	33.	14 – 6 =
14.	_____ = 11 – 4	34.	_____ = 13 – 5
15.	_____ = 12 – 3	35.	_____ = 15 – 8
16.	_____ = 13 – 2	36.	_____ = 18 – 9
17.	_____ = 11 – 2	37.	_____ = 20 – 4
18.	16 – 8 =	38.	_____ = 20 – 17
19	15 – 6 =	39.	_____ = 20 – 11
20.	12 – 5 =	40.	_____ = 20 – 3

EUREKA MATH™

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

Name _____   Date _____

1.	13 + 3 =	21.	11 – 8 =
2.	12 + 8 =	22.	13 – 7 =
3.	16 + 2 =	23.	15 – 8 =
4.	11 + 7 =	24.	12 + 6 =
5.	6 + 9 =	25.	13 + 2 =
6.	7 + 8 =	26.	9 + 11 =
7.	4 + 7 =	27.	6 + 8 =
8.	13 – 5 =	28.	8 + 9 =
9.	16 – 6 =	29.	7 + 5 =
10.	17 – 9 =	30.	13 – 7 =
11.	14 – 6 =	31.	15 – 8 =
12.	18 – 7 =	32.	11 – 9 =
13.	8 + 8 =	33.	12 – 3 =
14.	7 + 6 =	34.	14 – 5 =
15.	4 + 9 =	35.	13 + 6 =
16.	5 + 7 =	36.	8 + 5 =
17.	6 + 5 =	37.	4 + 7 =
18.	13 – 8 =	38.	7 + 8 =
19	16 – 9 =	39.	4 + 9 =
20.	14 – 8 =	40.	20 – 12 =

EUREKA MATH™

Lesson 1:   Use manipulatives to create equal groups.

engage^{ny}

Name _____   Date _____

1. Circle groups of two apples.

There are _____ groups of two apples.

2. Circle groups of three balls.
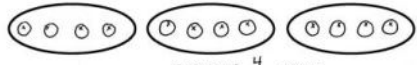
There are _____ groups of three balls.

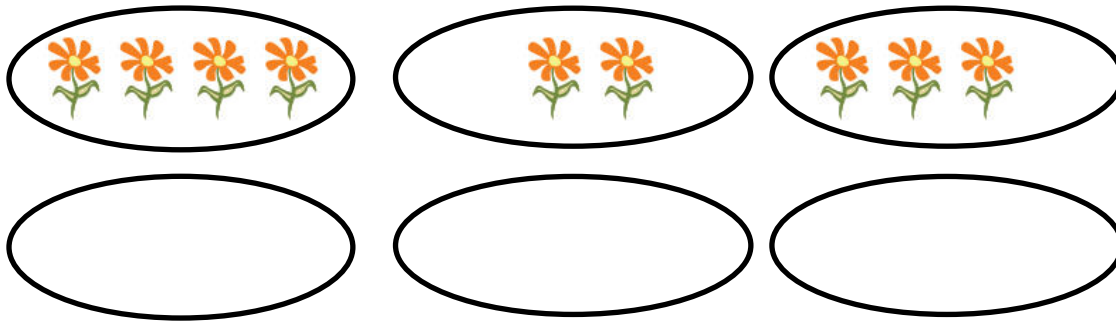3. Redraw the 12 oranges into 4 equal groups.
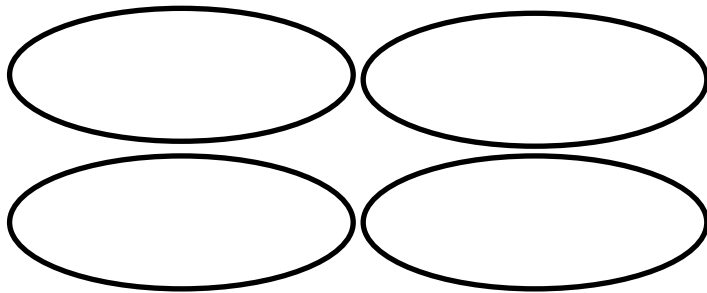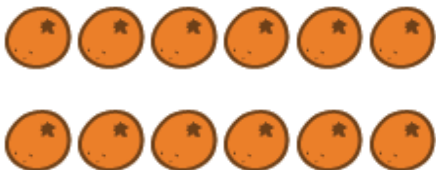
4 groups of _____ oranges

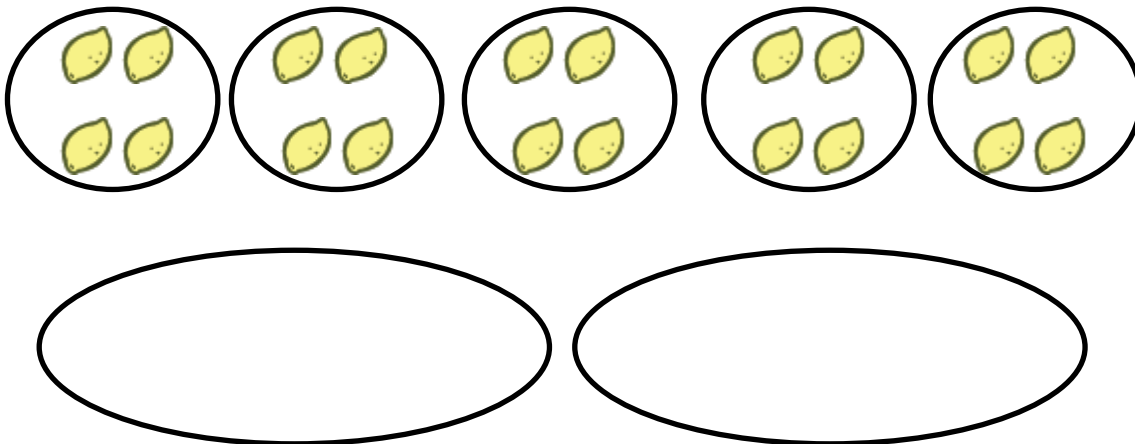4. Redraw the 12 oranges into 3 equal groups.
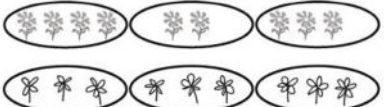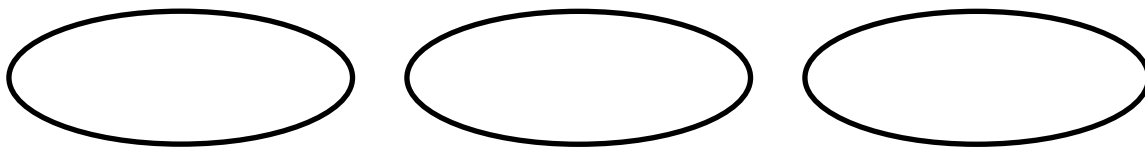
3 groups of _____ oranges
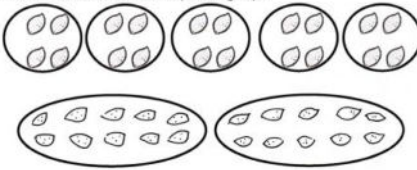
5. Redraw the flowers to make each of the 3 groups have an equal number.

3 groups of _____ flowers = _____ flowers.

6. Redraw the lemons to make 2 equal size groups.

2 groups of _____ lemons = _____ lemons.

Name _____   Date _____

1. Circle groups of 4 hats.

2. Redraw the smiley faces into 2 equal groups.
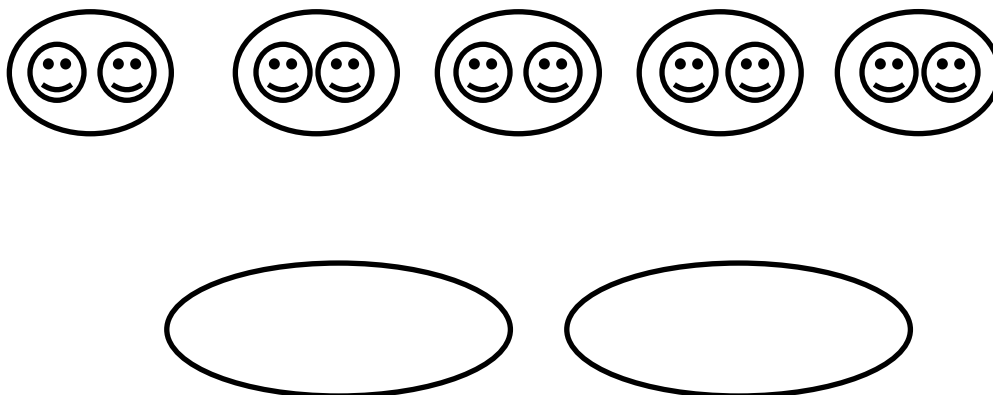
2 groups of _____ = _____.

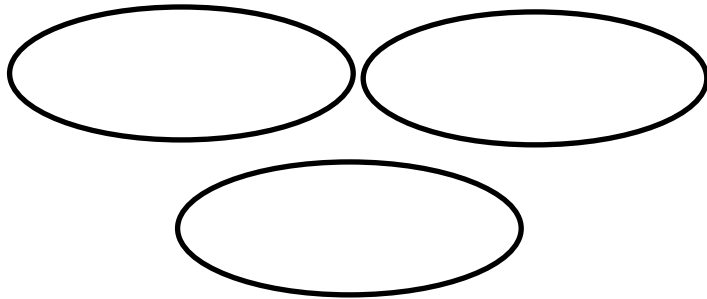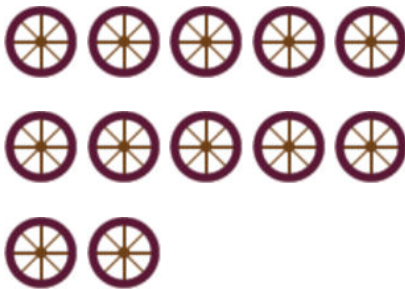Name _____   Date _____

1. Circle groups of two shirts.

There are _____ groups of two shirts.
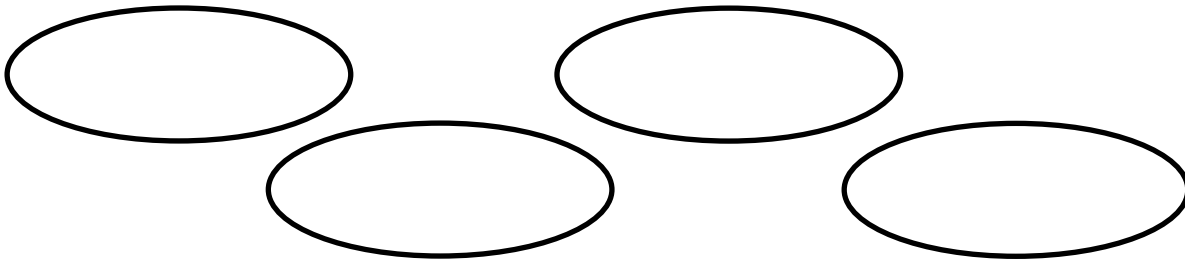
2. Circle groups of three pants.

There are _____ groups of three pants.

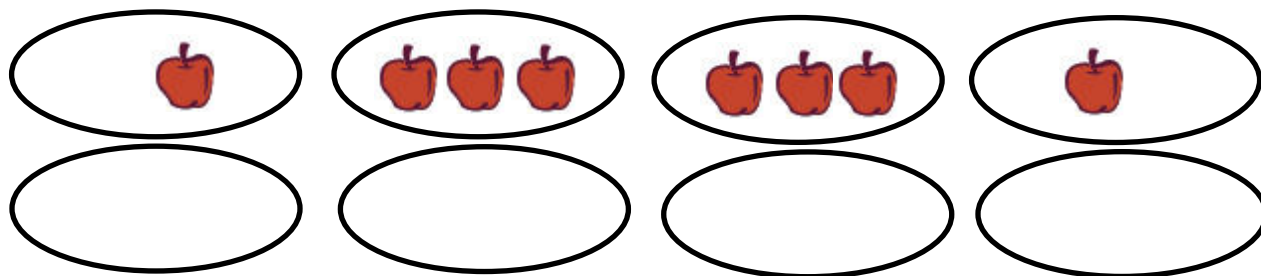3. Redraw the 12 wheels into 3 equal groups.

3 groups of _____ wheels

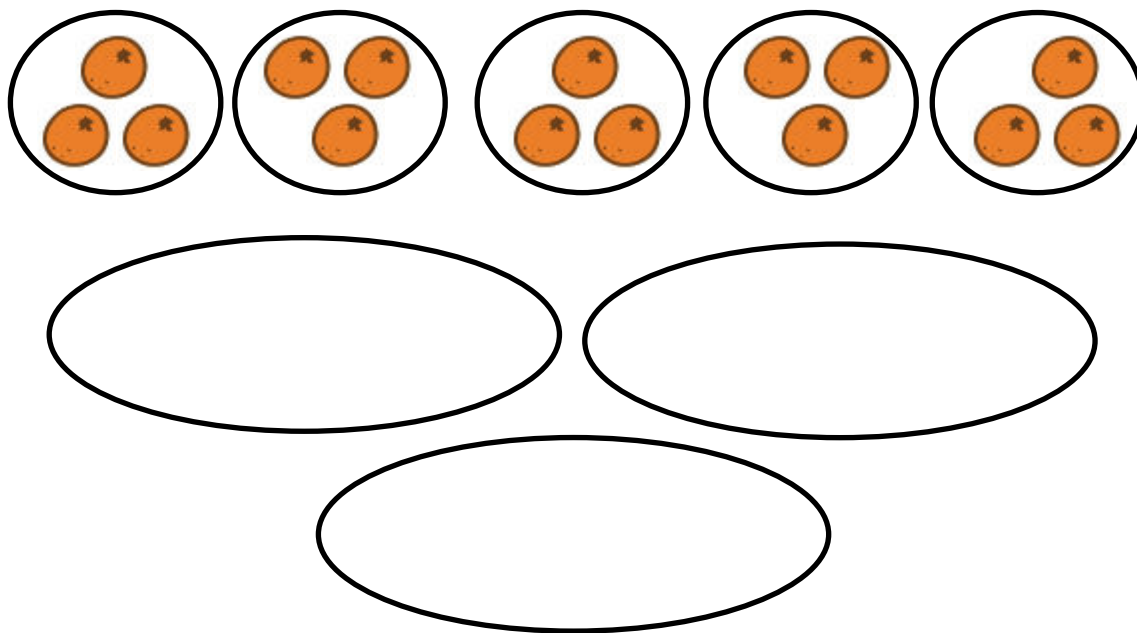4. Redraw the 12 wheels into 4 equal groups.

4 groups of _____ wheels

5. Redraw the apples to make each of the 4 groups have an equal amount.

4 groups of _____ apples = _____ apples.

6. Redraw the oranges to make 3 equal groups.

3 groups of _____ oranges = _____ oranges.