Study the following.

fraction of a group – a way to describe a part of a group by using equal parts.

Start with a group of 6 circles.　　　○○○○○○

It is already divided into 6 equal parts,
Or you could say you have a total of 6.
Each circle is the same size.

Shade some of the circles.　　　●●○○○○

This describes 2 parts of the group of 6 equal parts.

The fraction is written like this:　　　$\dfrac{2}{6}$　←— parts shaded
　　　　　　　　　　　　　　　　　　　　　　←— equal parts

or　　　　　　　　　　　　　　　$\dfrac{2}{6}$　←— parts shaded
　　　　　　　　　　　　　　　　　　←— total

We can say 2/6 of the group is shaded. This is part of a group.

Another example:

Three parts circled　　　X X X X X X X X

Eight equal parts, or 8 total

Write the fraction as $\dfrac{3}{8}$

We can say $\dfrac{3}{8}$ of the group is circled.

Fill in the blanks.

_____ parts shaded   ● ● ● ○ ○ ○ ○

_____ equal parts

The fraction is _____.

We can say _____ of the group is shaded.

_____ parts shaded

_____ total   ■ ■ □ □ □

The fraction is _____.

We can say _____ of the group is shaded.

_____ parts circled

_____ equal parts   (▲ ▲ ▲) ▲ ▲ ▲ ▲ ▲ ▲

The fraction is _____.

We can say _____ of the group is circled.

_____ parts circled

_____ total   (☺ ☺ ☺ ☺)

The fraction is _____.

We can say _____ of the group is circled.

What fraction of the group is shaded or circled?

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+ + + + +

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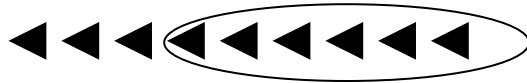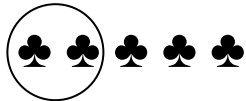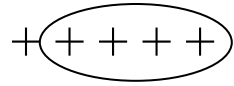
Draw and shade or circle 8 examples of fractions of a group, and write the fraction you shaded or circled.

Get a handful of coins, marbles, beans, or something similar. You will need at least 16 items.

Show fractions of a group using the items. Draw what you have shown.

$\dfrac{1}{2}$

$\dfrac{4}{5}$

$\dfrac{6}{7}$

$\dfrac{3}{10}$

$\dfrac{12}{16}$

Draw a picture and shade the fraction being described. Write the fraction.

Example: Sally had 12 cookies. She ate 3 of them. What fraction of the cookies did she eat?

○ ○ ○ ○ ○ ○ ○ ○ ○⬭○ ○ ○⬭   3 cookies eaten
                                       12 total cookies

The fraction is 3
                —
                12

1.   The teacher had 15 books. She handed out 10 of them to students. What fraction of them did she hand out?

2.   Bill had 12 quarters. He spent 5 of them. What fraction of his quarters did he spend?

3.   Kim had 10 pencils. She gave her friend 3 of them. What fraction of the pencils did she give to her friend?

4.   Jake had 4 puppies. He gave one to his neighbor. What fraction of the puppies did he give away?

Study the following.

More fractions of a group.

You can also take a group and divide it into equal parts, and talk about one or more of those equal parts.
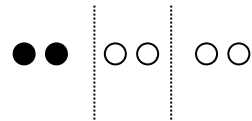
We have a group of 6 circles.   ○ ○ ○ ○ ○ ○

We divide it into 3 equal parts.   ○ ○ ⦙ ○ ○ ⦙ ○ ○
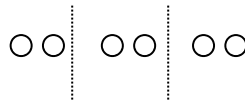
We want to describe one of the parts   ● ● ⦙ ○ ○ ⦙ ○ ○
(shaded) of the group using a fraction.

We write the fraction like this: $\underline{1}$ ◄── part shaded
                                          3 ◄──equal parts

We can say 1/3 of the group is shaded.

Another example:
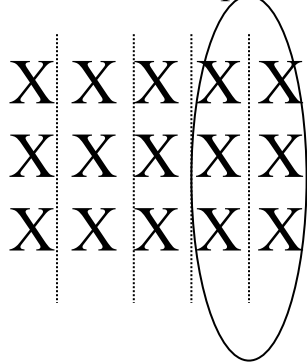
X X X X X $\underline{2}$ ◄ parts circled
X X X X X   5 ◄── equal parts
X X X X X

                    The fraction is 2/5.

                    We can say 2/5 of the group is circled.

Fill in the blanks.

_____ parts shaded   ●●● ○○○ ○○○

_____ equal parts

The fraction is _____.

We can say _____ of the group is shaded.

_____ parts shaded

_____ equal parts   ■■ ■■ □□ □□ □□
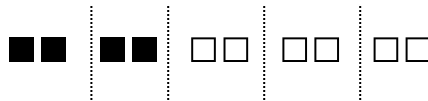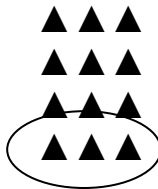
The fraction is _____.

We can say _____ of the group is shaded.

_____ parts circled
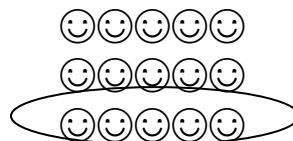
_____ equal parts

The fraction is _____.

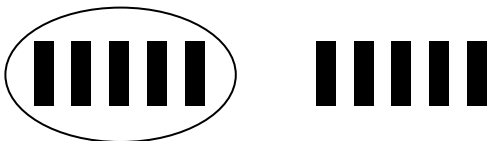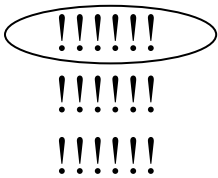We can say _____ of the group is circled.
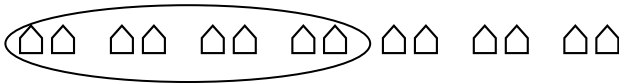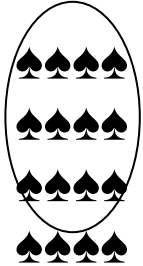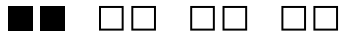

_____ parts circled

_____ equal parts

The fraction is _____.

We can say _____ of the group is circled.

What fraction of the group is shaded or circled?

▼ ▼ ▼ ▼   ⬭ ▼ ▼ ▼   ▼ ▼ ▼ ▼ ⬮

■■ ☐☐ ☐☐ ☐☐

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♠♠♠♠
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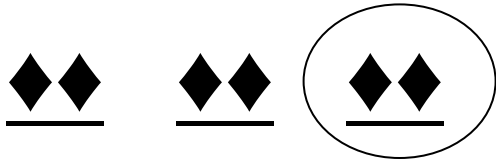⬭!!!!!!⬮
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Draw and shade or circle 6 examples of these kinds of fractions of a group. Write the fraction you circled or shaded.

Get a handful of coins, marbles, beans, or something similar. You will need at least 16 items.

Show fractions of a group as follows using the items. Draw what you have shown.
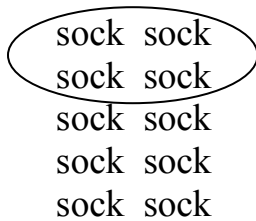
6 items, divided into groups of 2.   Show 1/3.

12 items, divided into groups of 4. Show 2/3.

12 items, divided into groups of 6. Show ½.

16 items, divided into groups of 4. Show ¼ .

Draw a picture and shade the fraction being described. Write the fraction.

Example: Bill had 5 pairs of socks (2 socks per pair). Two pairs were red.
What fraction were red?

sock sock
sock sock $\underline{2}$ parts circled
sock sock   5   equal parts
sock sock

sock sock   The fraction is 2/5.

1.   Jill had 4 groups of toys, with 3 toys in each group. Two of the groups
       were made of wood. What fraction of her toys were made of wood?

2.   Sam had 5 boxes of candy bars to sell, there were 6 bars in each box. Sam
       sold 2 boxes, or 12 bars total. What fraction of the bars were sold?

3.   Cindy owned 7 pairs of different kinds of dogs. Two kinds were poodles.
       What fraction were poodles?

4.   Dad has two hammers, two saws, and two screw drivers. What fraction of
       his tools are hammers.