

Framework for Worked Examples

Group 4 (Grisy, Kerri, Emmy)

Targeted Standard

Grade Level Standard

2.MD.7

Tell and write time from analog and digital clocks in five minute increments, using a.m. and p.m. Develop an understanding of common terms, such as, but not limited to, *quarter past*, *half past*, and *quarter to*.

Textbook Task Aligned to the Standard

Label the missing minutes around the clock. Then tell the time.



The time is ____ : ____.

Use the times to complete the timeline. Write something you might do at those times.

7:15 a.m. 11:25 a.m. 8:30 p.m.

2:50 p.m.
4:10 p.m.
8:45 a.m.

How is this standard assessed as aligned to the task? (NYS Released Items)

DIG DEEPER! A train ride starts at 6:40. The ride lasts 45 minutes. What time does the ride end?



School starts at quarter past 8. Are you early or late to school? Explain.



Arrive



Ways to Address Meeting the Standard

Use of hand held clocks (both big and individual)

Students can make their own clocks with movable hands

Start small so students master one skill at a time

- What do the "hands" represent and where/how to we write them
- What do the numbers represent? How do we write the time?
- Quarter past; half past
- Quarter to
- Elapsed time

A lot of hands-on activities (games/flip books/etc.)

Creating a list of activities that people do in the AM and PM

*** prevent the misconception that in telling time "quarter" is NOT 25

Worked Examples

Targeted Standard

Grade Level Standard

2.NBT.7b

Understand that in adding or subtracting up to three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and sometimes it is necessary to compose or decompose tens or hundreds.

Textbook Task Aligned to the Standard

A batting cage has 360 baseballs. There are 130 fewer softballs than baseballs. How many softballs are there?



Subtraction equation:

Model:



_____ softballs

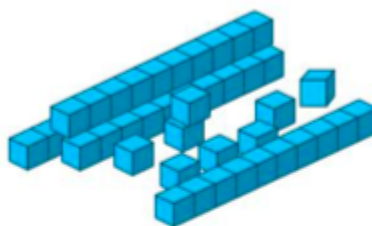
1. $46 + 26 = ?$

Tens	Ones

Tens	Ones
<input type="text"/>	
4	6
2	6

Model the problem. Make a quick sketch to show how you solved.

$$58 + 27 = \underline{\hspace{2cm}}$$



How is this standard assessed as aligned to the task? (NYS Released Items)

A crocodile weighs 535 pounds. A kangaroo weighs 340 pounds less than the crocodile. How much does the kangaroo weigh?

You want to do 80 jumping jacks. You do 45 in the morning and 39 in the evening. Do you reach your goal?

Ways to Address Meeting the Standard

One Way:

$621 - 230 = ?$

Another Way:

$621 - 230 = \underline{391}$

$29 + 34 = ?$

Model the numbers.

Tens	Ones
2	9
3	4
+	

Add the ones.
Regroup.

Tens	Ones
2	9
3	4
+	
	3

Add the tens.

Tens	Ones
1	
2	9
3	4
+	
6	3

Targeted Standard

Grade Level Standard

NY-3.NF.1

Number and Operations – Fractions

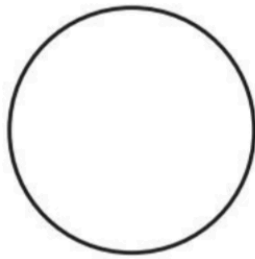
NY-3.NF.1 Develop understanding of fractions as numbers.

Understand a unit fraction, $\frac{1}{b}$, is the quantity formed by **1 part** when a whole is **partitioned** into **b equal parts**.

Understand a fraction $\frac{a}{b}$ is the quantity formed by **a** parts of size $\frac{1}{b}$.

Textbook Task Aligned to the Standard

- 10.** Divide the circle into 4 equal parts. Shade one part. What fraction of the whole is shaded?



$\frac{\square}{\square}$ is shaded.

- 11.** Divide the square into 3 equal parts. Shade one part. What fraction of the whole is shaded?



$\frac{\square}{\square}$ is shaded.

Big Ideas, Grade 3 Chapter 10: Understand a Unit Fraction

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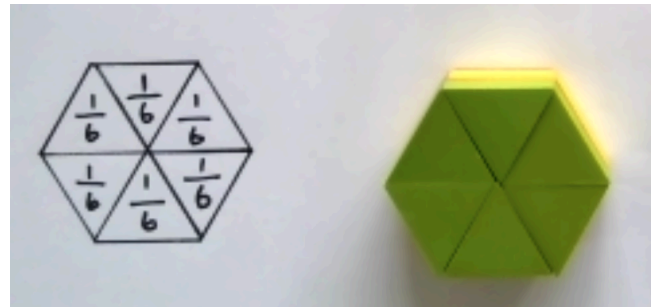
How is this standard assessed as aligned to the task? (NYS Released Items)

31 This question is worth 1 credit.

The model shown below is made of triangles of the same size and shape.



Each triangle is what fraction of the entire area of the model?



The shape is a hexagon.

There are 6 equal size triangles inside the hexagon.

Each triangle is $\frac{1}{6}$ of the entire area of the hexagon.

Students can use Pattern Blocks to model this problem.

Ways to Address Meeting the Standard

This standard relates to unit fractions.

First students need to know that the six triangles make a whole hexagon.

They can label each triangle using unit

whole $\frac{6}{6} = 1$

They can shade one triangle to represent $\frac{1}{6}$ of a whole.

We can have hands-on activities to

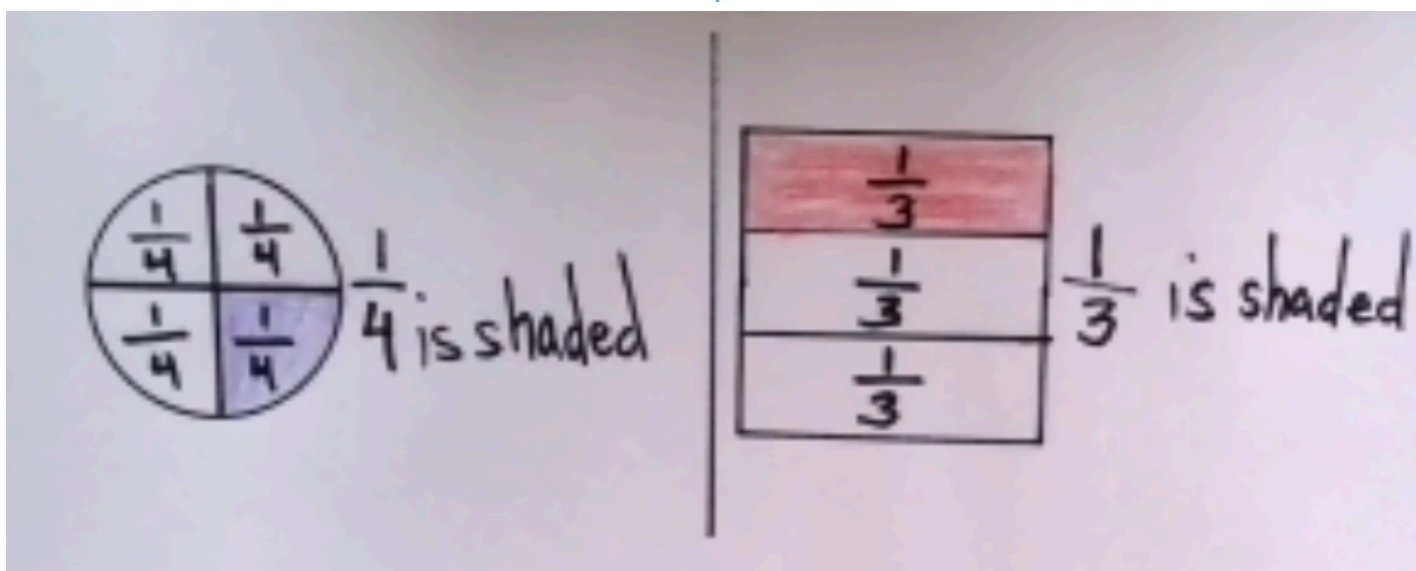
Have access to the pattern blocks for students to explore the concept of fractions.

fractions. This will give them the visual component that six parts makes the one	explore more the concept of fractions. During birthday parties we can have pizza and cake. They can debate on how to cut and why it is fair.	
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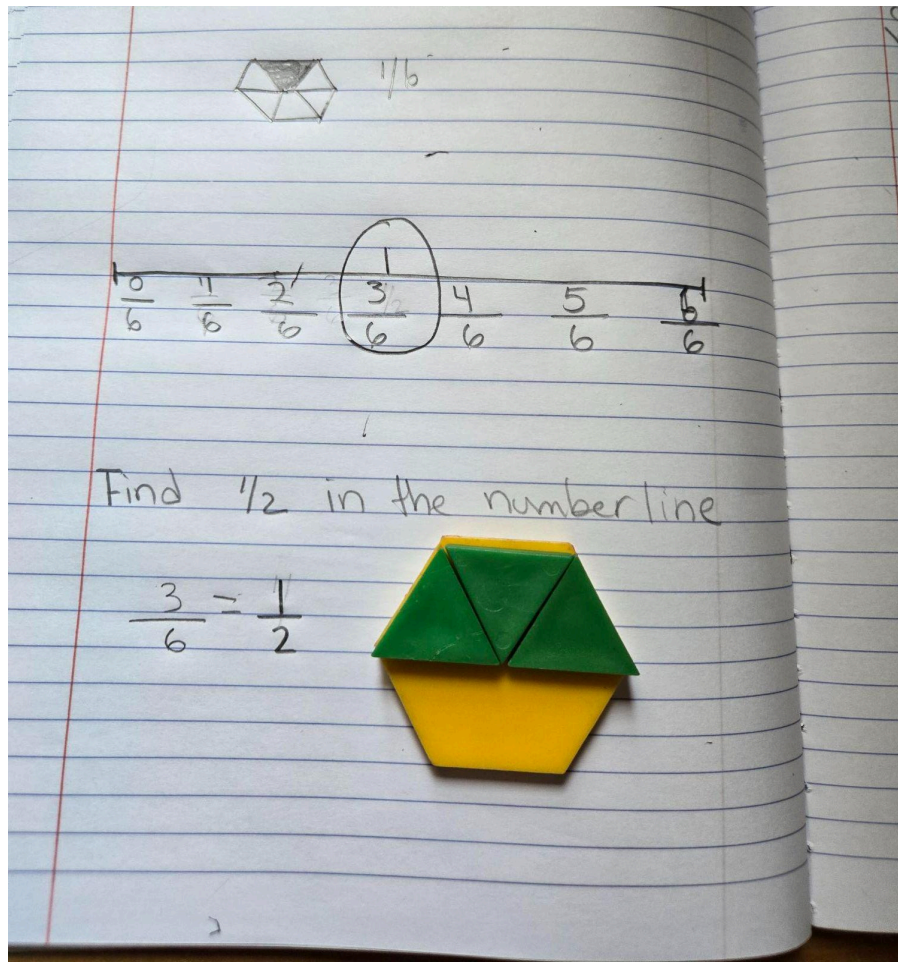
Worked Examples

- 10.** Divide the circle into 4 equal parts. Shade one part. What fraction of the whole is shaded?

- 11.** Divide the square into 3 equal parts. Shade one part. What fraction of the whole is shaded?



This worked example connects fractions of a whole to points on a number line. Equivalent fractions are addressed in [3.NF.3a](#) Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.



Targeted Standard

Grade Level Standard

3.OA.3

3.OA.6

- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.
- Understand division as an unknown-factor problem.

Released Item Aligned to the Standard

3.OA.3

Hilda and Mallory each have the same number of seashells.

- Hilda sorted her seashells into 3 groups with 8 seashells in each group.
- Mallory sorted her seashells into 6 equal groups.

How many seashells were in each of the groups Mallory made?

- A** 4
- B** 9
- C** 18
- D** 24

How is this standard assessed as aligned to the task? (NYS Released Items)

Students are tasked with solving a multi-step word problem involving equal groups.

- First, students can use different multiplication strategies and representations to find how many seashells Hilda has. This will also tell you how many seashells Mallory has as the problem states that they have the same number of seashells.
- Students can then use different strategies, including the relationship between multiplication and division, to find how many seashells are in each of the groups that Mallory made. This will then be a “group size unknown” problem.

Ways to Address Meeting the Standard

1. Drawing equal groups to represent multiplication and division.	2. Using the “double and half” strategy to find an unknown value. In this case, one factor is doubled and the other is halved to make a multiplication problem easier to compute.	3. Using the relationship between multiplication and division to determine an unknown value that will make an equation true.
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Worked Examples

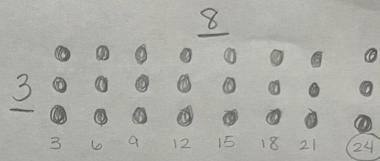
1. Equal Groups

Using Equal Groups

Hilda

$$3 \times 8 = \boxed{24}$$

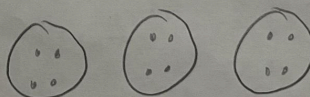
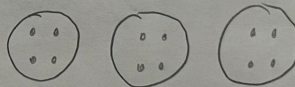
groups in each product
in all



mailory

$$6 \times \boxed{4} = 24$$

groups in each in all



*There are 4 seashells in each group that mailory made.

2. Double and Half

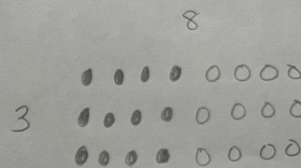
Double and Half

Hilda

$$3 \times 8 = \boxed{24}$$

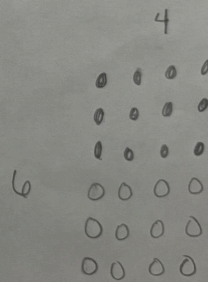
groups in each Product

double
↓
half
↓



mailory

$$6 \times \boxed{4} = 24$$



mailory has 4 seashells in each group.

3. Relationship between Multiplication and Division

Relationship between Operations

Hilda

groups in each Product
 $3 \times 8 = \boxed{24}$

Mallory

groups in each Product
 $6 \times \boxed{4} = 24$

$$24 \div 6 = \boxed{4}$$

Mallory put 4
seashells in
each group.

4. Using 100 Bead String

