Name _____ Date _____

Learning Target: I will multiply 4-digit by 1-digit numbers and 2-digit by 2-digit numbers

5th Grade - Readiness Standard 1 - 4.NBT.5- Form A

1. We Do Together: Label, multiply and show.

Label the partial lengths if the total length is 189

	100	80	9
7	7 x 100 700	7x80 560	7x9 63

Multiply to find each partial area

Show your thinking using numbers and symbols

189
x 7
700
560
+ 63
1323

or

63
560
+ 700
1323

2. Reflect: What questions do you have about multiplying a 3-digit number?

3. You Do Together: Label, multiply and show.

Label the partial lengths if the total length is 1896

	1000	800	90	6
7	7 x 1000 7000	7x800 5600	7x90 630	7x6 42

Multiply to find each partial area

Show your thinking using numbers and symbols

1896
x 7
7000
5600
630
+ 42
13272

or

42
630
5600
+ 7000
13272

Label the partial lengths if the total length is 18

	10	8
10	10 x 10 100	10 x 8 80
7	7 x 10 70	7 x 8 56

Multiply to find each partial area

Show your thinking using numbers and symbols

18
x 17
100
80
70
+ 56
306

or

56
70
80
+ 100
306

Name _____ Date _____

Learning Target: I will multiply multi-digit numbers

6th Grade - Readiness Standard 2 - 5.NBT.5 - Form A

1. We Do Together: Label, multiply and show.

Label the partial lengths if the total length is 2864

	2000	800	60	4
7	7 x 2000 14000	7 x 800 5600	7 x 60 420	7 x 4 28

Multiply to find each partial area

Show your thinking using numbers and symbols

```
  2864
x    7
14000
 5600
  420
+  28
20048
```

or

```
   28
  420
 5600
+14000
20048
```

2. Reflect: What questions do you have about multiplying multi-digit numbers?

3. You Do Together: Label, multiply and show.

Label the partial lengths if the total length is 28

	20	8
10	10 x 20 200	10 x 8 80
7	7 x 20 140	7 x 8 56

Multiply to find each partial area

Show your thinking using numbers and symbols

```
  28
x 17
200
 80
140
+ 56
476
```

or

```
  56
 140
  80
+200
 476
```

Label the partial lengths if the total length is 286

	200	80	6
10	10 x 200 2000	10 x 80 800	10 x 6 60
7	7 x 200 1400	7 x 80 560	7 x 6 42

Multiply to find each partial area

Show your thinking using numbers and symbols

```
  286
x  17
2000
 800
  60
1400
 560
  42
4862
```

or

```
   42
  560
 1400
   60
  800
+2000
 4862
```

Name _____ Date _____

Learning Target: I will divide up to a 4-digit by 1-digit number 5th Grade - Readiness Standard 2 - 4.NBT.6 - Form A

1. We Do Together: List, label, think multiply to divide and show.

List the multiples of 3

3 x 1 = 3 3 x 2 = 6 3 x 3 = 9

3 x 4 = 12 3 x 5 = 15 3 x 6 = 18

3 x 7 = 21 3 x 8 = 24 3 x 9 = 27

Label the missing lengths

3	20	6
	3(20) = 60	3(6) = 18

Show your thinking using numbers and symbols

```
   6
  20 ]  26
3)78
-60
 18
-18
  0
```

List the multiples of 9

9 x 1 = 9 9 x 2 = 18 9 x 3 = 27

9 x 4 = 36 9 x 5 = 45 9 x 6 = 54

9 x 7 = 63 9 x 8 = 72 9 x 9 = 81

Label the missing lengths

9	60	7
	9(60) = 540	9(7) = 63

Show your thinking using numbers and symbols

```
   7
  60 ]  67
9)603
-540
  63
 -63
   0
```

2. Reflect: What questions do you have about dividing a 3-digit number?

Name _____ Date _____

Learning Target: I will divide up to a 4-digit by 1-digit number 5th Grade - Readiness Standard 2 - 4.NBT.6 - Form A

3. You Do Together: List, label, think multiply to divide and show.

List the multiples of 7

7 x 1 = 7 7 x 2 = 14 7 x 3 = 21

7 x 4 = 28 7 x 5 = 35 7 x 6 = 42

7 x 7 = 49 7 x 8 = 56 7 x 9 = 63

Label the missing lengths

	1000	200	90	3
7	7(1000) 7000	7(200) 1400	7(90) 630	7(3) 21

Show your thinking using numbers and symbols

3
90
200
1000] 1293

7)9051
-7000
2051
-1400
651
-630
21
-21
0

List the multiples of 8

8 x 1 = 8 8 x 2 = 16 8 x 3 = 24

8 x 4 = 32 8 x 5 = 40 8 x 6 = 48

8 x 7 = 56 8 x 8 = 64 8 x 9 = 72

Label the missing lengths

	700	10	3
8	8(700) 5600	8(10) 80	8(3) 24

Show your thinking using numbers and symbols

3
10
700] 713

8)5704
-5600
104
-80
24
-24
0

Name _____ Date _____

Learning Target: I will divide 4-digit number

6th Grade - Readiness Standard 3 - 5.NBT.6 - Form A

1. We Do Together: List, label, think multiply to divide and show.

List the multiples of 3

3 x 1 = 3 3 x 2 = 6 3 x 3 = 9

3 x 4 = 12 3 x 5 = 15 3 x 6 = 18

3 x 7 = 21 3 x 8 = 24 3 x 9 = 27

Label the missing lengths

	2000	300	60	4
3	3(2000) 6000	3(300) 900	3(60) 180	3(4) 12

Show your thinking using numbers and symbols

4
60
300
2000] 2364

3)7092
-6000
1092
-900
192
-180
12
-12
0

List the multiples of 7

7 x 1 = 7 7 x 2 = 14 7 x 3 = 21

7 x 4 = 28 7 x 5 = 35 7 x 6 = 42

7 x 7 = 49 7 x 8 = 56 7 x 9 = 63

Label the missing lengths

	800	30	6
7	7(800) 5600	7(30) 210	7(6) 42

Show your thinking using numbers and symbols

6
30
800] 836

7)5852
-5600
252
-210
42
-42
0

2. Reflect: What questions do you have about dividing a 4-digit number?

DELTA MATH

Name ____________________ Date __________

Learning Target: I will divide 4-digit number

6th Grade - Readiness Standard 3 - 5.NBT.6 - Form A

3. You Do Together: List, label, think multiply to divide and show.

List the multiples of 20

20 x 1 = 20 20 x 2 = 40 20 x 3 = 60

20 x 4 = 80 20 x 5 = 100 20 x 6 = 120

20 x 7 = 140 20 x 8 = 160 20 x 9 = 180

Label the missing lengths

	300	20	7
20	20(300) 6000	20(20) 400	20(7) 140

Show your thinking using numbers and symbols

7
20
300 → 327

20) 6540
− 6000
540
− 400
140
− 140
0

List the multiples of 14

14 x 1 = 14 14 x 2 = 28 14 x 3 = 42

14 x 4 = 56 14 x 5 = 70 14 x 6 = 84

14 x 7 = 98 14 x 8 = 112 14 x 9 = 126

Label the missing lengths

	500	80	9
14	14(500) 7000	14(80) 1120	14(9) 126

Show your thinking using numbers and symbols

9
80
500 → 589

14) 8246
− 7000
1246
− 1120
126
− 126
0

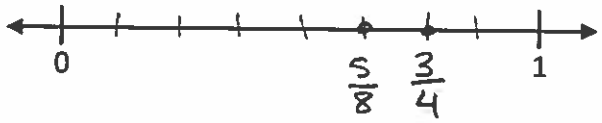
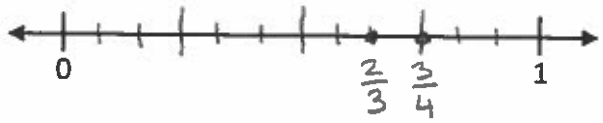
Name _____ Date _____

Learning Target: I will compare fractions with different numerators and different denominators

5th Grade - Readiness Standard 3 - 4.NF.2 - Form A

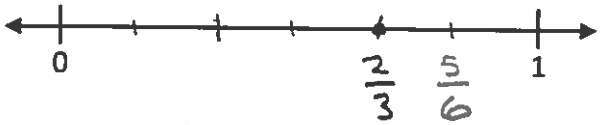
1. We Do Together: Rename, plot and compare.

< *Less Than* or > *Greater Than*

One denominator is a multiple of the other.	One denominator is NOT a multiple of the other.
Rename one fraction to create common denominators $\frac{3}{4} = \frac{3 \cdot 2}{4 \cdot 2} = \frac{6}{8}$ $\quad \frac{5}{8}$	**Rename** each fraction to create common denominators $\frac{2}{3} = \frac{2 \cdot 4}{3 \cdot 4} = \frac{8}{12}$ $\quad \frac{3}{4} = \frac{3 \cdot 3}{4 \cdot 3} = \frac{9}{12}$
Label each point on the number line 	**Label** each point on the number line 
Compare using > or < $\frac{3}{4} > \frac{5}{8}$	**Compare** using > or < $\frac{2}{3} < \frac{3}{4}$

2. Reflect: What questions do you have about comparing fractions?

3. You Do Together: Draw, compare and write.

One denominator is a multiple of the other.	One denominator is NOT a multiple of the other.
Rename one fraction to create common denominators $\frac{2}{3} = \frac{2 \cdot 2}{3 \cdot 2} = \frac{4}{6}$ $\quad \frac{5}{6}$	**Rename** each fraction to create common denominators $\frac{1}{3} = \frac{1 \cdot 4}{3 \cdot 4} = \frac{4}{12}$ $\quad \frac{1}{4} = \frac{1 \cdot 3}{4 \cdot 3} = \frac{3}{12}$
Label each point on the number line 	**Label** each point on the number line 
Compare using > or < $\frac{2}{3} < \frac{5}{6}$	**Compare** using > or < $\frac{1}{3} > \frac{1}{4}$

Name _____ Date _____

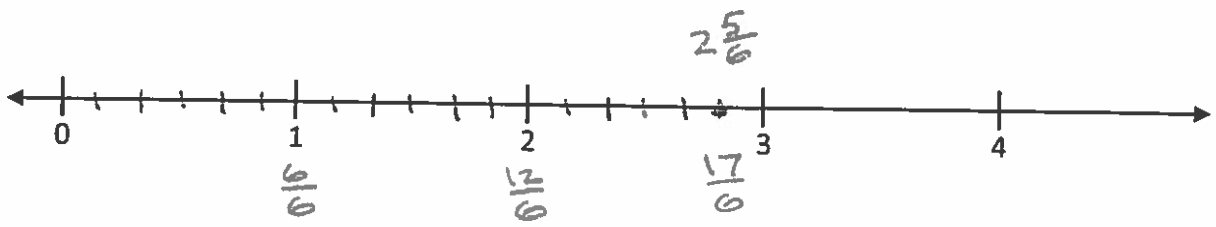
Learning Target: I will convert between improper fractions and mixed numbers

5th Grade - Readiness Standard 4 - 4.NF.3b - Form A

1. We Do Together: Draw, tell and write.

Draw and label the improper fraction on the number line

$\frac{17}{6}$



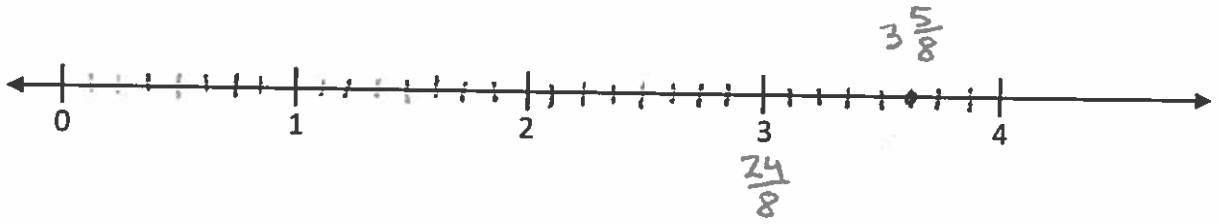
Tell how many wholes you see and the equivalent number of 6ths	**Tell** the part of the whole	**Write** the equivalent mixed number
$\frac{2}{}$ Wholes = $\frac{12}{6}$	$\frac{5}{6}$	$\frac{17}{6} = 2\frac{5}{6}$

2. Reflect: What questions do you have about converting between improper fractions and mixed numbers?

3. You Do Together: Draw, tell and write.

Draw and label the mixed number on the number line

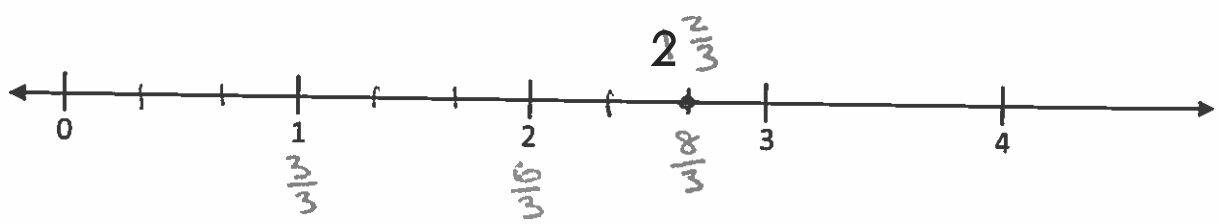
$3\frac{5}{8}$



Tell how many 8ths equals 3 wholes	**Tell** the part of the whole	**Write** the equivalent improper fraction
3 Wholes = $\frac{24}{8}$	$\frac{5}{8}$	$3\frac{5}{8} = \frac{29}{8}$

Draw and label the improper fraction on the number line

$\frac{8}{3}$



Tell how many wholes you see and the equivalent number of 3rds	**Tell** the part of the whole	**Write** the equivalent mixed number
$\frac{2}{}$ Wholes = $\frac{6}{3}$	$\frac{2}{3}$	$\frac{8}{3} = 2\frac{2}{3}$

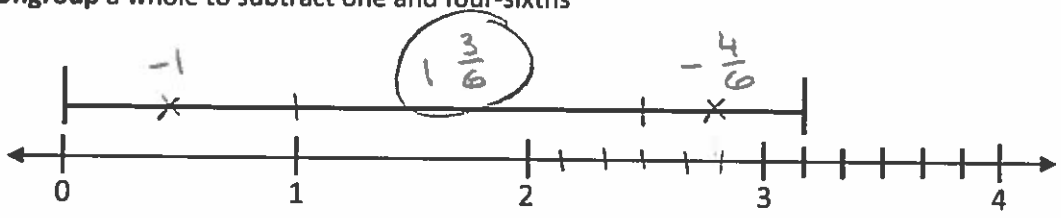
Name _____ Date _____

Learning Target: I will add and subtract mixed numbers with like denominators

5th Grade - Readiness Standard 5 - 4.NF.3c - Form A

1. We Do Together: Draw, ungroup and show.

Ungroup a whole to subtract one and four-sixths



Show how you subtracted

$2\frac{7}{6}$

~~$3\frac{1}{6}$~~

$-\ 1\frac{4}{6}$

$1\frac{3}{6}$ or $1\frac{1}{2}$

$\frac{3 \cdot 1}{3 \cdot 2} = \frac{1}{2}$

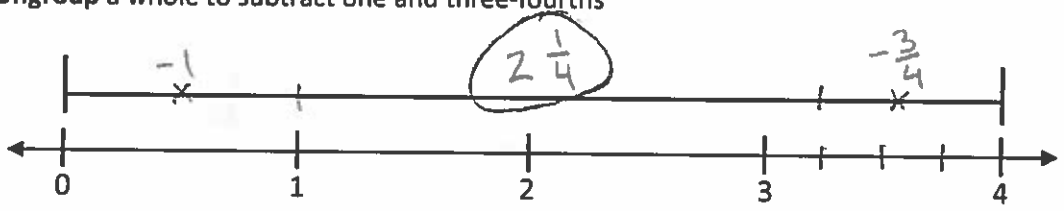
Tell what you ungrouped and the equivalent mixed number

1 Whole = $\frac{6}{6}$ $\quad 3\frac{1}{6} = 2\frac{7}{6}$

2. Reflect: What questions do you have about subtracting mixed numbers?

3. You Do Together: Draw, tell and show.

Ungroup a whole to subtract one and three-fourths



Show how you subtracted

$3\frac{4}{4}$

~~4~~

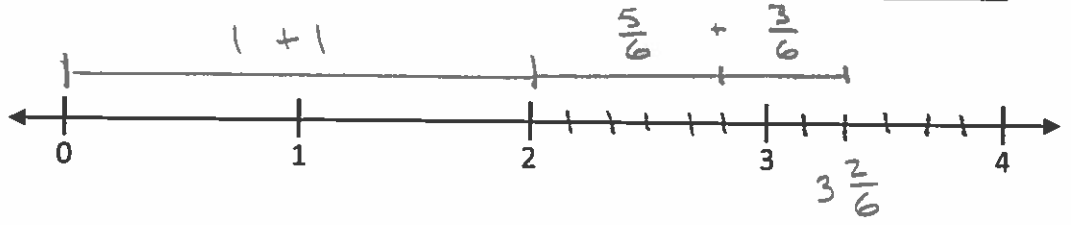
$-\ 1\frac{3}{4}$

$2\frac{1}{4}$

Tell what you ungrouped and the equivalent mixed number

1 Whole = $\frac{4}{4}$ $\quad 4\frac{0}{4} = 3\frac{4}{4}$

Draw one and five-sixths plus one and three-sixths by <u>adding the whole numbers first</u>



Show how you added

$1\frac{5}{6}$

$+\ 1\frac{3}{6}$

$2\frac{8}{6} = 3\frac{2}{6}$

or $3\frac{1}{3}$

$\frac{2 \cdot 1}{2 \cdot 3} = \frac{1}{3}$

Tell what you grouped and the equivalent mixed number

$\frac{6}{6}$ = 1 Whole $\quad \frac{5}{6} + \frac{3}{6} = \frac{8}{6} = 1\frac{2}{6}$

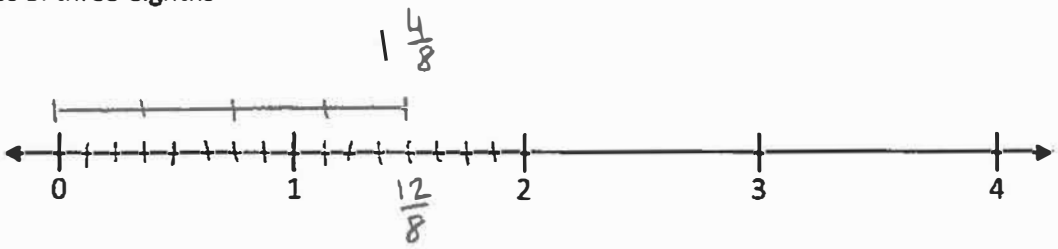
Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction 5th Grade - Readiness Standard 6 - 4.NF.4b - Form A

1. We Do Together: Draw, add and multiply.

Draw four groups of three-eighths

$4 \times \frac{3}{8}$



Add to find the total

$$4 \times \frac{3}{8} = \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} = \frac{12}{8}$$

Multiply to find the total as a mixed number

$$\frac{4}{1} \times \frac{3}{8} = \frac{12}{8} = 1\frac{4}{8} \text{ or } 1\frac{1}{2}$$

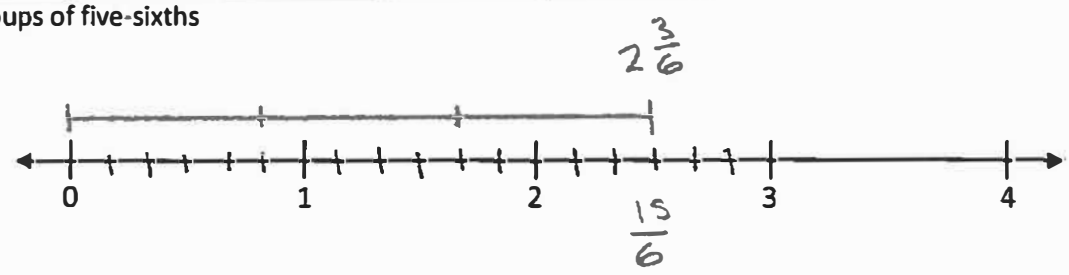
$\frac{4 \cdot 1}{4 \cdot 2} = \frac{1}{2}$

2. Reflect: What questions do you have about multiplying a whole number by a fraction?

3. You Do Together: Draw, add and multiply.

Draw three groups of five-sixths

$3 \times \frac{5}{6}$



Add to find the total

$$3 \times \frac{5}{6} = \frac{5}{6} + \frac{5}{6} + \frac{5}{6} = \frac{15}{6}$$

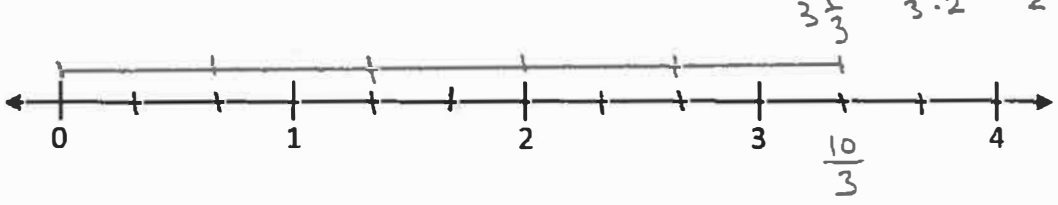
Multiply to find the total as a mixed number

$$\frac{3}{1} \times \frac{5}{6} = \frac{15}{6} = 2\frac{3}{6} \text{ or } 2\frac{1}{2}$$

Draw five groups of two-thirds

$5 \times \frac{2}{3}$

$\frac{3 \cdot 1}{3 \cdot 2} = \frac{1}{2}$



Add to find the total

$$5 \times \frac{2}{3} = \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \frac{10}{3}$$

Multiply to find the total as a mixed number

$$\frac{5}{1} \times \frac{2}{3} = \frac{10}{3} = 3\frac{1}{3}$$

Name _____ Date _____

Learning Target: I will add and subtract mixed numbers with different denominators

6th Grade - Readiness Standard 4 - 5.NF.1 - Form A

1. We Do Together: Rewrite, draw, tell and show.

Rewrite using common denominators

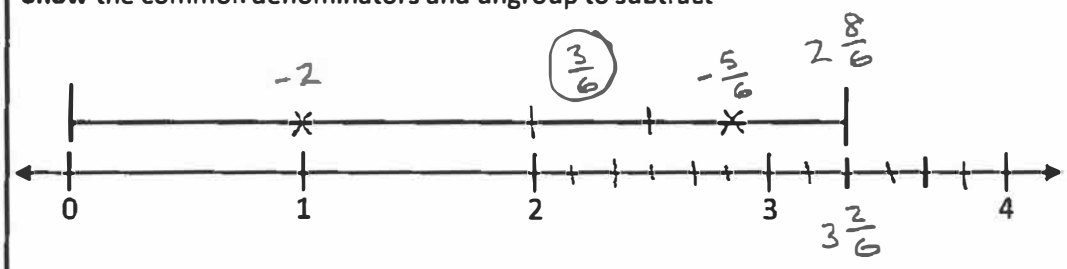
$3\frac{1}{3}$ → $3\frac{1}{3\times2}$ → $3\frac{2}{6}$

$-\ 1\frac{5}{6}$ → $-\ 1\frac{5}{6}$

$2\frac{8}{6}$

$\frac{3\cdot1}{3\cdot2}$ → $\frac{3}{6}$ or $\frac{1}{2}$

Show the common denominators and ungroup to subtract



Tell what you ungrouped and the equivalent mixed number

1 Whole = $\frac{6}{6}$ $\quad 3\frac{2}{6} = 2\frac{8}{6}$

Show your thinking using numbers and symbols in the box to the far left

2. Reflect: What questions do you have about subtracting mixed numbers?

3. You Do Together: Rewrite, draw, tell and show.

Rewrite using common denominators

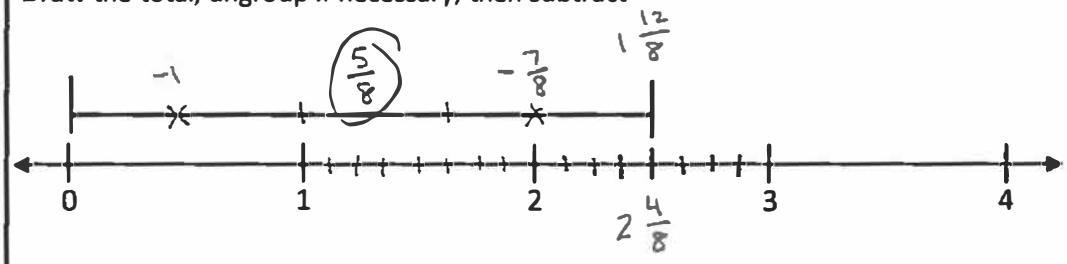
$2\frac{1}{2}$ → $2\frac{1\times4}{2\times4}$ → $2\frac{4}{8}$

$-\ 1\frac{7}{8}$ → $-\ 1\frac{7}{8}$

$1\frac{12}{8}$

$\frac{5}{8}$

Draw the total, ungroup if necessary, then subtract



Tell what you ungrouped and the equivalent mixed number

1 Whole = $\frac{8}{8}$ $\quad 2\frac{4}{8} = 1\frac{12}{8}$

Show your thinking using numbers and symbols in the box to the far left

Rewrite using common denominators

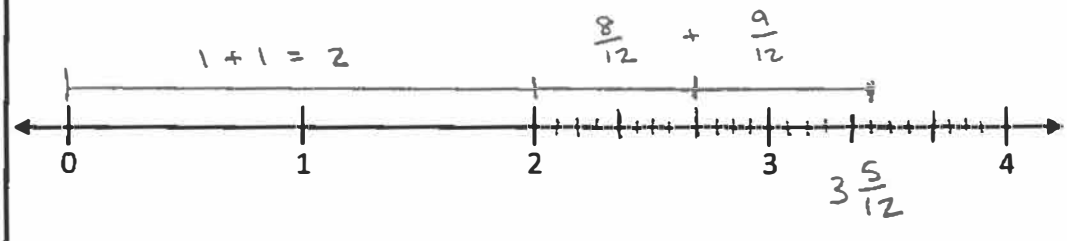
$1\frac{2}{3}$ → $1\frac{2\times4}{3\times4}$ → $1\frac{8}{12}$

$+\ 1\frac{3}{4}$ → $+\ 1\frac{3\times3}{4\times3}$ → $1\frac{9}{12}$

$2\frac{17}{12}$

or $3\frac{5}{12}$

Draw the total by adding the whole numbers first



Tell what you grouped and the equivalent mixed number

1 Whole = $\frac{12}{12}$ $\quad \frac{8}{12} + \frac{9}{12} = \frac{17}{12} = 1\frac{5}{12}$

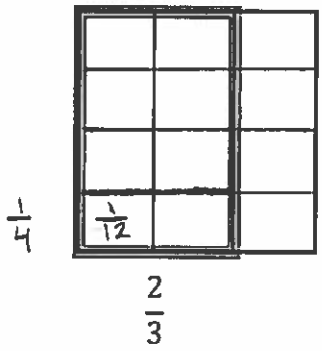
Show your thinking using numbers and symbols in the box to the far left

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction 6th Grade - Readiness Standard 5 - 5.NF.4b - Form A

1. We Do Together: Draw, identify and multiply.

Draw 1-fourth of 2-thirds of the whole



Identify the size of 1-fourth of the 2-thirds

1-fourth of 2-thirds is $\frac{2}{12}$ of the whole

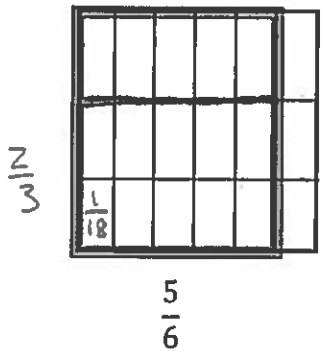
Multiply numerators and denominators, then simplify

$$\frac{1}{4} \times \frac{2}{3} = \frac{2}{12} = \frac{2 \cdot 1}{2 \cdot 6} = \frac{1}{6}$$

2. Reflect: What questions do you have about multiplying a whole number by a fraction?

3. You Do Together: Draw, identify and multiply.

Draw 2-thirds of 5-sixths of the whole



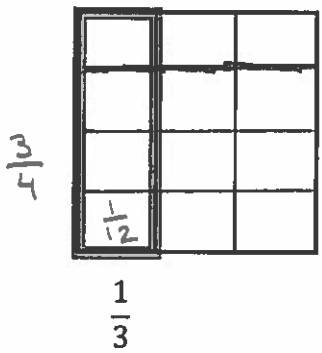
Identify the size of 2-thirds of the 5-sixths

2-thirds of 5-sixths is $\frac{10}{18}$ of the whole

Multiply numerators and denominators, then simplify

$$\frac{2}{3} \times \frac{5}{6} = \frac{10}{18} = \frac{2 \cdot 5}{2 \cdot 9} = \frac{5}{9}$$

Draw 3-fourths of 1-third of the whole



Identify the size of 3-fourths of the 1-third

3-fourths of 1-third is $\frac{3}{12}$ of the whole

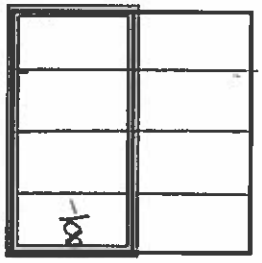
Multiply numerators and denominators, then simplify

$$\frac{3}{4} \times \frac{1}{3} = \frac{3}{12} = \frac{3 \cdot 1}{3 \cdot 4} = \frac{1}{4}$$

Name _____ Date _____

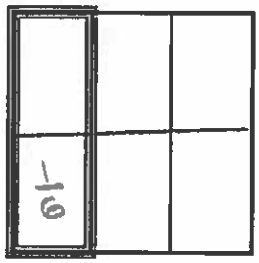
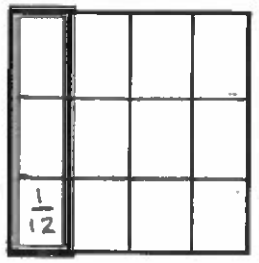
Learning Target: I will divide a unit fraction by a whole number 6th Grade - Readiness Standard 6 - 5.NF.7a - Form A

1. We Do Together: Divide, identify, think multiply to divide and share.

Divide 1-half of the whole into 4 equal parts	**Identify** the size of each part	**Think** multiply to divide
 $\frac{1}{2}$	$\frac{1}{2} \div 4 = \frac{1}{8}$	$\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$
	Share how 4 is related to $\frac{1}{4}$ $\frac{1}{4}$ is the reciprocal of 4 or $\frac{4}{1}$	

2. Reflect: What questions do you have about dividing a unit fraction by a whole number?

3. You Do Together: Divide, identify, think multiply to divide and share.

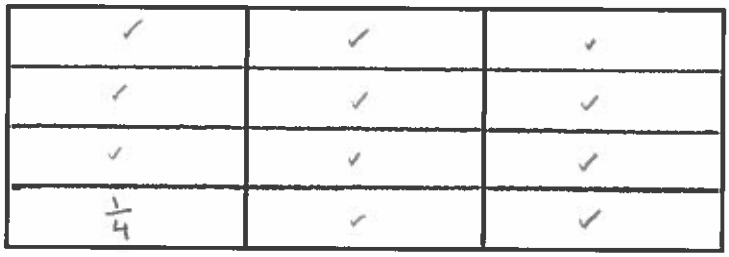
Divide 1-third of the whole into 2 equal parts	**Identify** the size of each part	**Think** multiply to divide
 $\frac{1}{3}$	$\frac{1}{3} \div 2 = \frac{1}{6}$	$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$
	Share how 2 is related to $\frac{1}{2}$ $\frac{1}{2}$ is the reciprocal of 2 or $\frac{2}{1}$	
Divide 1-fourth of the whole into 3 equal parts	**Identify** the size of each part	**Think** multiply to divide
 $\frac{1}{4}$	$\frac{1}{4} \div 3 = \frac{1}{12}$	$\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$
	Share how 3 is related to $\frac{1}{3}$ $\frac{1}{3}$ is the reciprocal of 3 or $\frac{3}{1}$	

Name _____ Date _____

Learning Target: I will divide a whole number by a unit fraction 6th Grade - Readiness Standard 7 - 5.NF.7b - Form A

1. We Do Together: Divide, identify and think multiply to divide.

Each squares to represent 1 whole. **Divide** the 3 wholes into equal parts of 1-fourth



Identify how many 1-fourths are in 3 wholes

$3 \div \frac{1}{4} = 12$

Think multiply to divide

$3 \times 4 = 12$

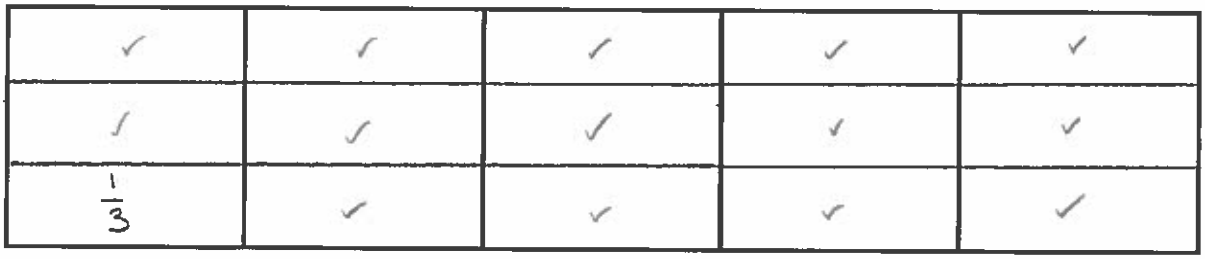
Share how $\frac{1}{4}$ is related to 4

4 is the reciprocal of $\frac{1}{4}$

2. Reflect: What questions do you have about dividing a whole number by a unit fraction?

3. You Do Together: Divide, identify and think multiply to divide.

Each squares to represent 1 whole. **Divide** the 5 wholes into equal parts of 1-third



Identify how many 1-thirds are in 5 wholes

$5 \div \frac{1}{3} = 15$

Think multiply to divide

$5 \times 3 = 15$

Share how $\frac{1}{3}$ is related to 3

3 is the reciprocal of $\frac{1}{3}$