4TH GRADE

PRIORITY MATH GOALS

Building Number Sense!

Dr. Nicki Newton 2022

I CAN MULTIPLY & DIVIDE

I CAN MULTIPLY WITHIN 100

2 X 4 5 X 10 8 X 9

I CAN MULTIPLY 1-DIGIT BY 2-DIGIT NUMBERS

(I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.)

2 x 12

I can multiply 1-DIGIT BY 3-DIGIT NUMBERS

(I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.)

3 X 135

I CAN MULTIPLY 1-digit BY 4-digit NUMBERS

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

5 X 2678

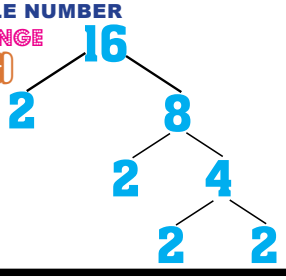
I CAN MULTIPLY 2-DIGIT BY 2-DIGIT NUMBERS

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

12 x 12

I can find all FACTOR PAIR

OF A WHOLE NUMBER IN THE RANGE OF 1-100



I KNOW MULTIPLES

2 4 6 8

I know if A NUMBER IS PRIME or composite

5 is Prime

12 is composite

I can divide within 100

	0										
÷ 0	0	0	0	0	0	0	0	0	0	0	0
÷ 1	0	1	2	3	4	5	6	7	8	9	10
÷ 2	0	2	4	6	8	10	12	14	16	18	20
÷ 3	0	3	6	9	12	15	18	21	24	27	30
÷ 4	0	4	8	12	16	20	24	28	32	36	40
÷ 5	0	5	10	15	20	25	30	35	40	45	50
÷ 6	0	6	12	18	24	30	36	42	48	54	60
÷ 7	0	7	14	21	28	35	42	49	56	63	70
÷ 8	0	8	16	24	32	40	48	56	64	72	80
÷ 9	0	9	18	27	36	45	54	63	72	81	90
÷ 10	0	10	20	30	40	50	60	70	80	90	100

I can divide 2-digit by 1-digit numbers

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

78 ÷ 5

10 ÷ 5

50	25

Remainder of 3

78 = 15 x 5 + 3

I CAN DIVIDE 3-DIGIT BY 1-DIGIT NUMBERS.

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

135 ÷ 8

10 + 5 + 1

80	40	8

Remainder of 7

135 = 16 x 8 + 7

I CAN DIVIDE 4-DIGIT BY 1-DIGIT NUMBERS.

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models

1570/2

750 + 35

1500	70

785

I CAN SOLVE DIVISION PROBLEMS WITH REMAINDERS

43 ÷ 7

6 x 7 + 1

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I CAN MULTIPLY WITHIN 100

2 X 4 5 X 10 8 X 9

I CAN MULTIPLY 1-DIGIT BY 2-DIGIT NUMBERS

(I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.)

2 x 12

I CAN MULTIPLY 1-DIGIT BY 3-DIGIT NUMBERS

(I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.)

3 X 135

I CAN MULTIPLY 1-digit BY 4-digit NUMBERS

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

5 X 2678

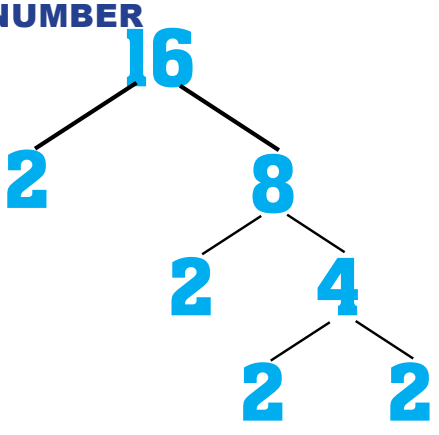
I CAN MULTIPLY 2-DIGIT BY 2-DIGIT NUMBERS

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models

12 x 12

I can find all FACTOR PAIRS

OF A WHOLE NUMBER IN THE RANGE OF 1-100



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I KNOW MULTIPLES

2 4 6 8

I know if A NUMBER IS PRIME or composite

5 is Prime

12 is composite

I can divide within 100

	0	1	2								
= 0	0	0	0	0	0	0	0	0	0	0	0
= 1	0	1	2	3	4	5	6	7	8	9	10
= 2	0	2	4	6	8	10	12	14	16	18	20
= 3	0	3	6	9	12	15	18	21	24	27	30
= 4	0	4	8	12	16	20	24	29	32	36	40
= 5	0	5	10	15	20	25	30	38	40	45	50
= 6	0	6	12	18	24	30	36	36	48	54	60
= 7	0	7	14	21	28	35	42	42	56	63	70
= 8	0	8	16	24	32	40	48	49	64	72	80
= 9	0	9	18	27	36	45	54	63	72	81	90
= 10	0	10	20	30	40	50	60	70	80	90	100

I can divide

2-digit by 1-digit numbers

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

78 ÷ 5

10 ÷ 5

50	25

Remainder of 3

78 = 15 x 5 + 3

I CAN DIVIDE

3-DIGIT BY 1-DIGIT NUMBERS.

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models.

135 ÷ 8

10 + 5 + 1

80	40	8

Remainder of 7

135 = 16 x 8 + 7

I CAN DIVIDE

4-DIGIT BY 1-DIGIT NUMBERS.

I can illustrate and explain the calculation by using equations, rectangular arrays and/or area models

1570/2 750 + 35

1500	70

785

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I CAN SOLVE WORD PROBLEMS

I CAN SOLVE 2 STEP WORD PROBLEMS

LUKE HAD 17 MARBLES
HIS BROTHER HAD
2 TIMES AS MANY.

HOW MANY DID THEY
HAVE ALTOGETHER?

I CAN SOLVE MULTI-STEP WORD PROBLEMS

MARIA HAD 3 RINGS.
Her sister HAD 4 TIMES
as many as she did. Her sister then
gave her 2.

How many does Maria have now?

How many does her sister have now?

How many do they have altogether?

3 + 2 = 5 12 - 2 = 10 5 + 10 = 15

I CAN SOLVE BASIC MULTIPLICATION WORD PROBLEMS

THERE WERE 12 ROWS
OF APPLE TREES
THERE WERE 10
IN EACH ROW.

HOW MANY APPLE
TREES WERE THERE.

12 × 10 = 120

I CAN SOLVE BASIC DIVISION WORD PROBLEMS

JAMAL HAD 10 RINGS.
He shared them with his brother.
They now have the same amount.
WRITE AN EQUATION
FOR THIS PROBLEM

10 ÷ 2 = 5

I CAN SOLVE THE 3 TYPES OF MULTIPLICATIVE COMPARISON WORD PROBLEMS

SUE HAS 9 BRACELETS

SHE HAS 3 TIMES AS MANY AS HER SISTER

HOW MANY DOES HER SISTER HAVE?

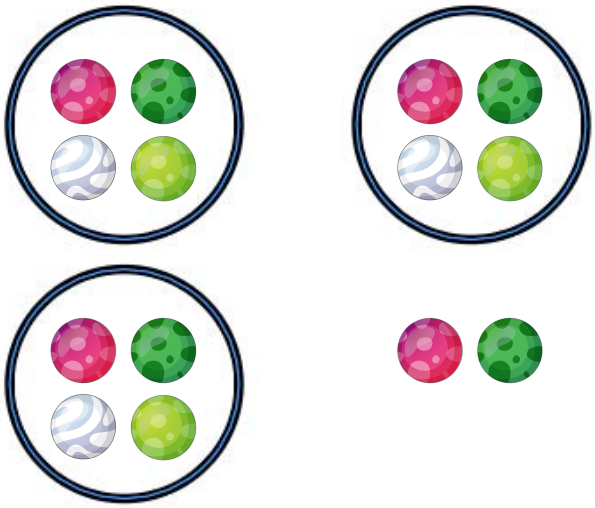
$$9 \div 3 = 3$$

I CAN INTERPRET THE REMAINDER.

HONG HAD 14 TOYS

HE SHARED THEM BETWEEN HIS 2 FRIENDS AND HIMSELF.

How many did each person get?



I CAN GENERATE A NUMBER PATTERN THAT FOLLOWS A GIVEN RULE.

Make a pattern

THAT SHOWS A NUMBER BEING MULTIPLIED BY 5.

5, 10, 15, 20, 25, 30, 35, 40, 45, 50...

I UNDERSTAND PLACE VALUE

4,251 = 4000 + 200 + 50 + 1

Four thousand two hundred fifty one

I understand that numbers to the left increase and numbers to the right decrease.

← 10x the amount

→ 1/10 the amount

55,555

50,000 + 5,000 + 500 + 50 +5

I can use PLACE VALUE WHEN COMPARING WHOLE NUMBERS

2345 > 457

I CAN TALK ABOUT NUMBERS IN EXPANDED FORM, STANDARD FORM AND WORD FORM.

2570 = 2000 + 500 + 70 + 0

TWO THOUSAND FIVE HUNDRED SEVENTY

I CAN COMPARE NUMBERS USING >, =, AND < SYMBOLS

2345 > 1236

I can round
NUMBERS
TO ANY PLACE.

2567
rounds to
3000

I CAN ADD MULTI-DIGIT NUMBERS

2578+8907

I CAN SUBTRACT MULTI-DIGIT NUMBERS.

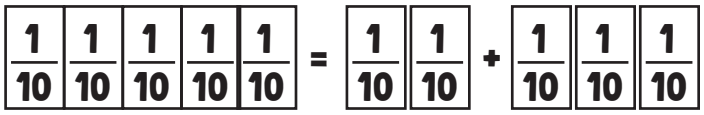
2000 - 99

I UNDERSTAND FRACTIONS

I CAN DECOMPOSE A FRACTION IN MORE THAN ONE WAY

I CAN JUSTIFY DECOMPOSITIONS BY USING A VISUAL FRACTION MODEL.

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



I CAN RECOGNIZE AND GENERATE EQUIVALENT FRACTIONS.

$$\frac{2}{4} = \frac{4}{8}$$

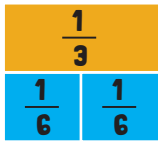
I CAN COMPARE FRACTIONS WITH DIFFERENT NUMERATORS AND DIFFERENT DENOMINATORS.

I CAN RECORD THE RESULT OF COMPARISONS WITH SYMBOLS

>, =, OR <, AND JUSTIFY THE CONCLUSIONS

e.g., by using a visual fraction model.

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



I CAN ADD MIXED NUMBERS WITH LIKE DENOMINATORS

$$1\frac{1}{3} + \frac{2}{3}$$

I CAN SUBTRACT NUMBERS WITH LIKE DENOMINATORS

$$2\frac{4}{5} - \frac{1}{5}$$

I CAN ADD FRACTIONS WITH LIKE DENOMINATORS

$$\frac{1}{10} + \frac{3}{10}$$

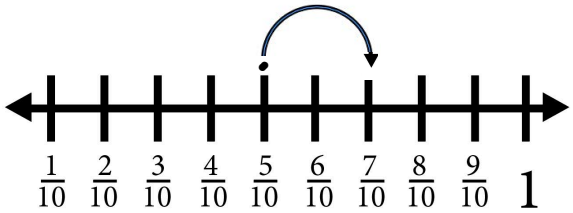
I CAN SUBTRACT FRACTIONS WITH LIKE DENOMINATORS

$$\frac{5}{10} - \frac{4}{10}$$

I can solve addition fraction word problems by using visual fraction models and equations to represent the problem.

RAUL RAN 2/10 OF A MILE IN THE MORNING AND 5/10 OF A MILE IN THE AFTERNOON.

HOW FAR DID HE RUN?



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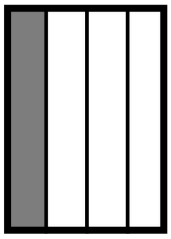
I CAN SOLVE SUBTRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM

GRANDMA MADE A CAKE. THE KIDS ATE 1/4 OF IT.
HOW MUCH IS LEFT?

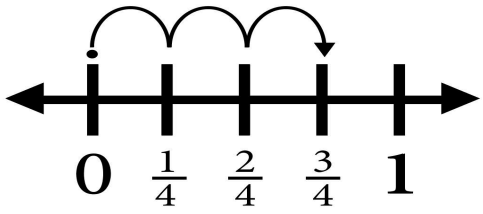


I CAN MULTIPLY A FRACTION BY A WHOLE NUMBER.

$$4 \times \frac{1}{4}$$

I CAN SOLVE WORD PROBLEMS INVOLVING MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM

MARY RAN 1/4 OF A MILE FOR 3 DAYS.
HOW FAR DID SHE RUN?



$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

I UNDERSTAND DECIMALS

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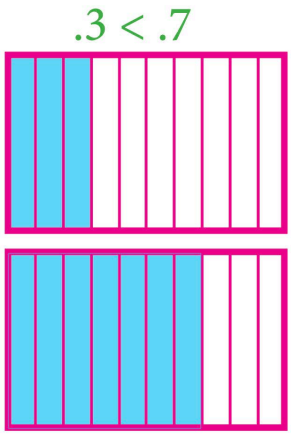
I can express a fraction with a denominator 10 as an equivalent fraction with a denominator of 100.
I can add two fractions with denominators of 100

$$\frac{2}{10} = \frac{20}{100}$$

I can use decimal notation for fractions with denominators 10 or 100.

$$.10 = \frac{1}{10}$$

I can compare 2 decimals to hundredths by reasoning about their size.



GREAT MATH WORK!

CAN MULTIPLY WITHIN 100

2 X 4 5 X 10 8 X 9

GREAT MATH WORK!

CAN MULTIPLY 1-DIGIT BY 2-DIGIT NUMBERS

2 X 12

GREAT MATH WORK!

CAN MULTIPLY 1-DIGIT BY 3-DIGIT NUMBERS

3 X 135

GREAT MATH WORK!

CAN MULTIPLY 1-DIGIT BY 4-DIGIT NUMBERS

5 X 2678

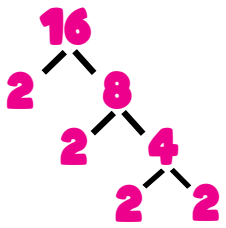
GREAT MATH WORK!

CAN MULTIPLY 2-DIGIT BY 2-DIGIT NUMBERS

12 X 12

GREAT MATH WORK!

CAN FIND ALL FACTOR PAIRS OF A WHOLE NUMBER IN THE RANGE OF 1-100



GREAT MATH WORK!

KNOW MULTIPLES

2 4 6 8

GREAT MATH WORK!

KNOW IF A NUMBER IS PRIME OR COMPOSITE

5 is Prime

12 is Composite

GREAT MATH WORK!

CAN DIVIDE WITHIN 100

	0									
= 0	0	0	0	0	0	0	0	0	0	0
= 1	0	1	2	3	4	5	6	7	8	9	10
= 2	0	2	4	6	8	10	12	14	16	18	20
= 3	0	3	6	9	12	15	18	21	24	27	30
= 4	0	4	8	12	16	20	24	29	32	36	40
= 5	0	5	10	15	20	25	30	38	40	45	50
= 6	0	6	12	18	24	30	36	36	48	54	60
= 7	0	7	14	21	28	35	42	42	56	63	70
= 8	0	8	16	24	32	40	48	49	64	72	80
= 9	0	9	18	27	36	45	54	63	72	81	90
= 10	0	10	20	30	40	50	60	70	80	90	100

GREAT MATH WORK!

CAN DIVIDE 2-DIGIT BY 1-DIGIT NUMBERS

78 ÷ 5

10 ÷ 5

50	25

Remainder of 3

78 = 15 x 5 + 3

GREAT MATH WORK!

CAN DIVIDE 3-DIGIT BY 1-DIGIT NUMBERS

135 ÷ 8

10 + 5 + 1

80	40	8

Remainder of 7

135 = 16 x 8 + 7

GREAT MATH WORK!

CAN SOLVE 2 STEP PROBLEMS

- Luke has 17 marbles his brother had 2 times as many. How many did they have altogether?

GREAT MATH WORK!

CAN SOLVE MULTI-STEP PROBLEMS

- Maria had 3 rings. Her sister had 4 times as many as she did. Her sister then gave her 2. How many does Maria have now?
- How many does her sister have now?
- How mamnydo they have altogether?

3 + 2 = 5 12 - 2 = 10 5 + 10 = 15

GREAT MATH WORK!

CAN SOLVE BASIC MULTIPLICATION WORD PROBLEMS

There were 12 rows of apple trees. There were 10 in each row. How many apples trees were there?

12 × 10 = 120

GREAT MATH WORK!

CAN SOLVE BASIC DIVISION WORD PROBLEMS

~~Jamal had 10 rings. He shared them with his brother. They have now the same amount. Write an equation for this problem.~~ 10÷2 = 5

GREAT MATH WORK!

CAN SOLVE 3 TYPES OF MULTIPLICATIVE COMPARISON WORD PROBLEMS

Sue has 9 bracelets. Shae has 3 times as many as her sister. How many does her sister have?

$9 \div 3 = 3$

GREAT MATH WORK!

CAN INTERPRET THE REMAINDER

Hong had 4 toys. He shared them with his 2 friends. How many did each person get?

GREAT MATH WORK!

CAN GENERATE A NUMBER PATTERN THAT FOLLOWS A GIVEN RULE

5, 10, 15, 20, 25, 30, 35, 40, 45, 50...

GREAT MATH WORK!

UNDERSTANDS PLACE VALUE

4,251 = 4000 + 200 + 50 + 1

Four thousand two hundred fifty one

GREAT MATH WORK!

Understands that numbers to the left increase and numbers to the right decrease.

10x the amount

1/10 the amount

55,555

50,000 + 5,000 + 500 + 50 +5

GREAT MATH WORK!

CAN USE PLACE VALUE WHEN COMPARING WHOLE NUMBERS

2345 > 457

GREAT MATH WORK!

CAN TALK ABÖUT NUMBERS IN EXPANDED FÖRM. STANDARD FÖRM AND WÖRD FÖRM

2570 = 2000 + 500 + 70 + 0

TWÖ THÖUSAND FIVE HUNDRED SEVENTY

GREAT MATH WORK!

CAN CÖMPARE NUMBERS USING >, =, AND < SYMBÖLS

2345 > 1236

GREAT MATH WORK!

CAN RÖUND NUMBERS TÖ THE HUNDRED THÖUSAND PLACE

2567 rounds to 3000

GREAT MATH WORK!

CAN ADD MULTI-DIGIT NUMBERS

2578 + 8907

GREAT MATH WORK!

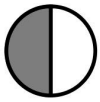
CAN SUBTRACT MULTI-DIGIT NUMBERS

2000 - 99

GREAT MATH WORK!

CAN UNDERSTAND FRACTIONS

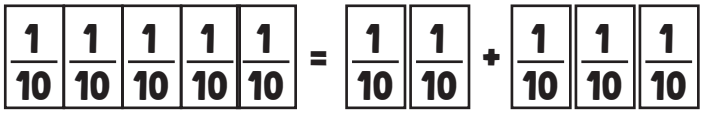
$\frac{1}{4}$  $\frac{3}{5}$

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

GREAT MATH WORK!

CAN DECOMPOSE A FRACTION IN MORE THAN ONE WAY

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



GREAT MATH WORK!

CAN RECOGNIZE AND GENERATE EQUIVALENT FRACTIONS

$$2/4 = 4/8$$

GREAT MATH WORK!

CAN COMPARE FRACTIONS WITH DIFFERENT NUMERATORS AND DIFFERENT DENOMINATORS

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

GREAT MATH WORK!

CAN RECORD THE RESULT OF COMPARISONS WITH SYMBOLS

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

GREAT MATH WORK!

CAN ADD MIXED NUMBERS WITH LIKE DENOMINATORS

$$1\frac{1}{3} + \frac{2}{3}$$

GREAT MATH WORK!

CAN SUBTRACT MIXED NUMBERS WITH LIKE DENOMINATORS

$$2\frac{4}{5} - \frac{1}{5}$$

GREAT MATH WORK!

CAN ADD FRACTIONS WITH LIKE DENOMINATORS

$$\frac{1}{10} + \frac{3}{10}$$

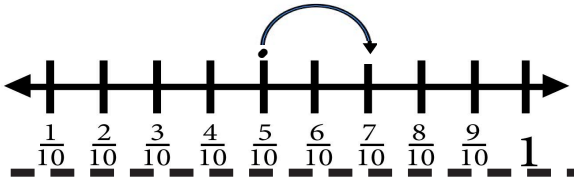
GREAT MATH WORK!

CAN SUBTRACT FRACTIONS WITH LIKE DENOMINATORS

$$\frac{5}{10} - \frac{4}{10}$$

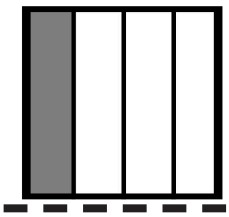
GREAT MATH WORK!

CAN SOLVE ADDITION FRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM



GREAT MATH WORK!

CAN SOLVE SUBTRACTION FRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM



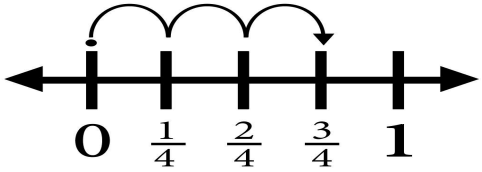
GREAT MATH WORK!

CAN MULTIPLY A FRACTION BY A WHOLE NUMBER

$4 \times \frac{1}{4}$

GREAT MATH WORK!

CAN SOLVE WORD PROBLEM S INVOLVING MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER USING MODELS AND EQUATIONS TO REPRESENT THE PROBLEM



$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

GREAT MATH WORK!

CAN UNDERSTAND DECIMALS

GREAT MATH WORK!

Can express a fraction with a denominator 10 as an equivalent fraction with denominator 100.

$$\frac{2}{10} = \frac{20}{100}$$

GREAT MATH WORK!

CAN USE DECIMAL NOTATION FOR FRACTIONS WITH DENOMINATORS 10 OR 100

$$.10 = \frac{1}{10}$$

GREAT MATH WORK!

CAN COMPARE 2 DECIMALS TO HUNDREDTHS BY REASONING ABOUT THEIR SIZE

GREAT MATH WORK!

CAN RECOGNIZE THE COMPARISONS ARE VALID ONLY WHEN THE TWO DECIMALS REFER TO THE SAME WHOLE

GREAT MATH WORK!

CAN RECORD THE RESULTS OF COMPARISONS WITH THE SYMBOLS >, =, OR <, AND JUSTIFYING THE CONCLUSIONS. E.G., BY USING A VISUAL MODEL

I CAN

MULTIPLY

AND

DIVIDE

I CAN MULTIPLY

WITHIN

100

2×4 5×10 8×9

I CAN MULTIPLY
1-DIGIT BY 2-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS. RECTANGULAR ARRAYS AND/OR AREA MODELS

2×12

I CAN MULTIPLY
1-DIGIT BY 3-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

3×135

I CAN MULTIPLY

1-DIGIT BY 4-DIGIT NUMBERS

(RECTANGULAR ARRAYS AND/OR AREA MODELS.)

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

5 X 2678

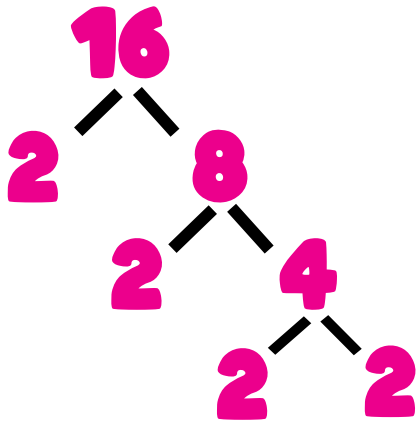
I CAN MULTIPLY

2-DIGIT BY 2-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

12 X 12

I CAN FIND ALL FACTOR PAIRS OF A WHOLE NUMBER IN THE RANGE OF 1-100



I KNOW MULTIPLES

2 4 6 8

I KNOW IF A NUMBER IS PRIME OR COMPOSITE

5 IS PRIME

12 IS COMPOSITE

I CAN DIVIDE WITHIN 100

	0	1	2	3	4	5	6	7	8	9	10
= 0	0	0	0	0	0	0	0	0	0	0	0
= 1	0	1	2	3	4	5	6	7	8	9	10
= 2	0	2	4	6	8	10	12	14	16	18	20
= 3	0	3	6	9	12	15	18	21	24	27	30
= 4	0	4	8	12	16	20	24	29	32	36	40
= 5	0	5	10	15	20	25	30	38	40	45	50
= 6	0	6	12	18	24	30	36	36	48	54	60
= 7	0	7	14	21	28	35	42	42	56	63	70
= 8	0	8	16	24	32	40	48	49	64	72	80
= 9	0	9	18	27	36	45	54	63	72	81	90
= 10	0	10	20	30	40	50	60	70	80	90	100

I CAN DIVIDE 2-DIGIT BY 1-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

$$78 \div 5$$

10 ÷ 5

50	25

REMAINDER OF 3

$$78 = 15 \times 5 + 3$$

I CAN DIVIDE

3-DIGIT BY 1-DIGIT NUMBERS.
I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

$$135 \div 8$$

10 + 5 + 1

80	40	8

Remainder of 7

$$135 = 16 \times 8 + 7$$

I CAN DIVIDE

4-DIGIT BY 1-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODEL.

1570 ÷ 2

750 + 35

1500	70

785

I CAN SOLVE DIVISION PROBLEMS WITH REMAINDERS

43 ÷ 7

6 x 7 + 1

I CAN SOLVE WORD PROBLEMS

I CAN SOLVE

2 STEP WORD PROBLEMS

LUKE HAD 17 MARBLES.
HIS BROTHER HAD 2 TIMES AS MANY.

HOW MANY DID THEY HAVE ALTOGETHER?

I CAN SOLVE MULTI-STEP WORD PROBLEMS

MARIA HAD 3 RINGS.
HER SISTER HAD 4 TIMES AS MANY AS SHE DID. HER SISTER THENGAVE HER 2.

HOW MANY DOES MARIA HAVE NOW?

HOW MANY DOES HER SISTER HAVE NOW?

HOW MANY DO THEY HAVE ALTOGETHER?

3 + 2 = 5 12 - 2 = 10 5 + 10 = 15

I CAN SOLVE

BASIC MULTIPLICATION WORD PROBLEMS

THERE WERE 12 ROWS OF APPLE TREES.
THERE WERE 10 IN EACH ROW.

HOW MANY APPLE TREES WERE THERE?

12 × 10 = 120

I CAN SOLVE

BASIC DIVISION WORD PROBLEMS

JAMAL HAD 10 RINGS. HE SHARED THEM WITH HIS BROTHER. THEY NOW HAVE THE SAME AMOUNT.

WRITE THE EQUATION IN THE BOX.

$$10 \div 2 = 5$$

I CAN SOLVE THE 3 TYPES OF MULTIPLICATIVE COMPARISON WORD PROBLEMS

SUE HAS 9 BRACELETS.
SHE HAS 3 TIMES AS MANY AS HER SISTER.

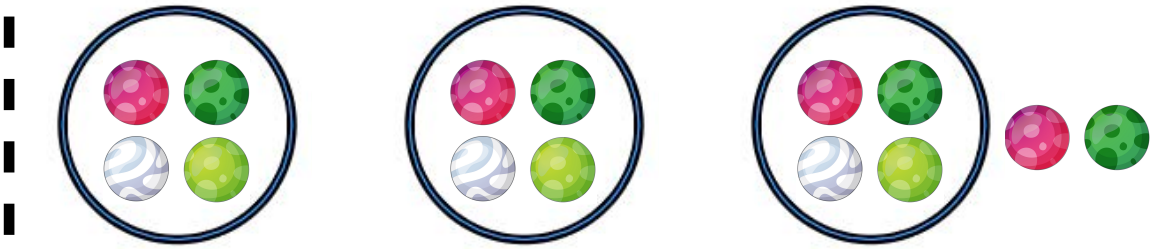
HOW MANY DOES HER SISTER HAVE?

$$9 \div 3 = 3$$

I CAN INTERPRET THE REMAINDER

HONG HAD 14 TOYS. HE SHARED THEM BETWEEN HIS 2 FRIENDS AND HIMSELF.

HOW MANY DID EACH PERSON GET?



I CAN GENERATE A NUMBER PATTERN THAT FOLLOWS A GIVEN RULE.

5, 10, 15, 20, 25, 30, 35, 40, 45, 50...

I UNDERSTAND PLACE VALUE

4,251 = 4000 + 200 + 50 + 1

Four thousand two hundred fifty one

UNDERSTANDS THAT NUMBERS TO THE LEFT INCREASE AND NUMBERS TO THE RIGHT DECREASE.

← 10x the amount

→ 1/10 the amount

55,555

50,000 + 5,000 + 500 + 50 +5

I CAN TALK ABOUT NUMBERS IN EXPANDED FORM, STANDARD FORM AND WORD FORM

$2570 = 2000 + 500 + 70 + 0$

TWO THOUSAND FIVE HUNDRED SEVENTY

I CAN USE PLACE VALUE WHEN COMPARING WHOLE NUMBERS

2345 > 457

I CAN COMPARE NUMBERS USING >, =, AND < SYMBOLS

2345 > 1236

I CAN ROUND NUMBERS TO THE HUNDRED THOUSAND PLACE

256,789 ROUNDS TO 300,000

I CAN ADD MULTI-DIGIT NUMBERS

2578+8907

I CAN SUBTRACT MULTI-DIGIT NUMBERS

2000 - 99

I UNDERSTAND FRACTIONS

I CAN DECOMPOSE FRACTIONS IN MORE THAN ONE WAY

I CAN JUSTIFY DECOMPOSITIONS BY USING A VISUAL FRACTION MODEL.

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

$$\frac{1}{10}\ \frac{1}{10}\ \frac{1}{10}\ \frac{1}{10}\ \frac{1}{10} = \frac{1}{10}\ \frac{1}{10} + \frac{1}{10}\ \frac{1}{10}\ \frac{1}{10}$$

I CAN RECOGNIZE AND GENERATE EQUIVALENT FRACTIONS

$$\frac{2}{4} = \frac{4}{8}$$

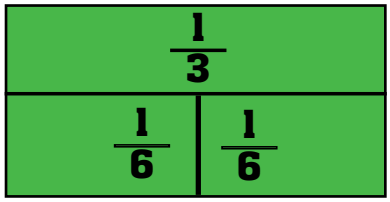
I CAN COMPARE FRACTIONS WITH DIFFERENT NUMERATORS AND DIFFERENT DENOMINATORS

I CAN RECORD THE RESULT OF COMPARISONS WITH SYMBOLS

>, =, OR <

AND JUSTIFY THE CONCLUSIONS, E.G. BY USING A VISUAL FRACTION MODEL.

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



I CAN ADD MIXED NUMBERS WITH LIKE DENOMINATORS

$$1\frac{1}{3}+\frac{2}{3}$$

I CAN SUBTRACT MIXED NUMBERS WITH LIKE DENOMINATORS

$$2\frac{4}{5}-\frac{1}{5}$$

I CAN ADD FRACTIONS WITH LIKE DENOMINATORS

$$\frac{1}{10}+\frac{3}{10}$$

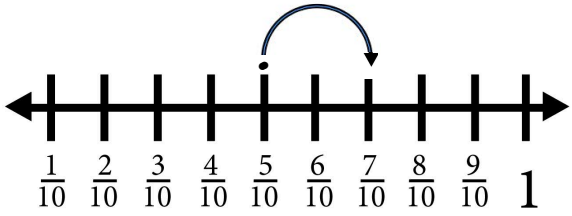
I CAN SUBTRACT FRACTIONS WITH LIKE DENOMINATORS

$$\frac{5}{10}-\frac{4}{10}$$

I CAN SOLVE ADDITION FRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM

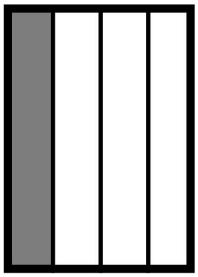
RAUL RAN 2/10 OF A MILE IN THE MORNING AND 5/10 OF A MILE IN THE AFTERNOON.

HOW FAR DID HE RUN?



I CAN SOLVE SUBTRACTION FRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM

GRANDMA MADE A CAKE.
THE KIDS ATE 1/4 OF IT.
HOW MUCH IS LEFT?

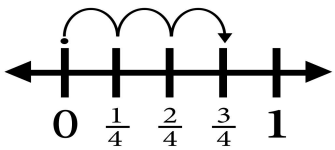


I CAN MULTIPLY A FRACTION BY A WHOLE NUMBER

$$2 \times \frac{1}{4}$$

I CAN SOLVE WORD PROBLEMS INVOLVING MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER BY USING VISUAL FRACTION MODELS AND EQUATIONS REPRESENTING THE PROBLEM

MARY RAN 1/4 OF A MILE FOR 3 DAYS.
HOW FAR DID SHE RUN?



$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

I UNDERSTAND DECIMALS

I CAN EXPRESS A FRACTION WITH A DENOMINATOR 10 AS AN EQUIVALENT FRACTION WITH A DENOMINATOR OF 100.
I CAN ADD TWO FRACTIONS WITH DENOMINATORS OF 100

$$\frac{2}{10} = \frac{20}{100}$$

I CAN USE DECIMAL NOTATION FOR FRACTIONS WITH DENOMINATORS 10 AND 100

$$.10 = \frac{1}{10}$$

I CAN COMPARE 2 DECIMALS TO HUNDREDTHS BY REASONING ABOUT THEIR SIZE.

$$.3 > .7$$

I CAN

MULTIPLY

AND

DIVIDE

I CAN MULTIPLY

WITHIN

100

2 x 4 5 x 10 8 x 9

I CAN MULTIPLY 1-DIGIT BY 2-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

2 x 12

I CAN MULTIPLY

1-DIGIT BY 3-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

3 X 135

I CAN MULTIPLY

1-DIGIT BY 4-DIGIT NUMBERS

(RECTANGULAR ARRAYS AND/OR AREA MODELS.)

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

5 X 2678

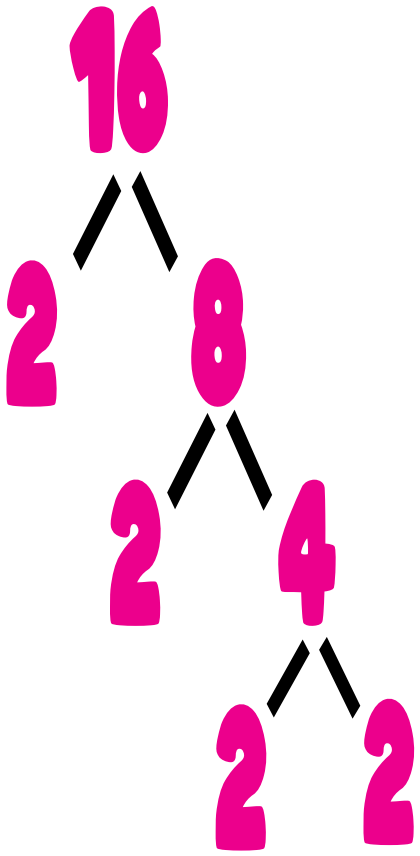
I CAN MULTIPLY

2-DIGIT BY 2-DIGIT NUMBERS

I CAN ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS AND/OR AREA MODELS.

12 X 12

I CAN FIND ALL FACTOR PAIRS OF A WHOLE NUMBER IN THE RANGE OF 1-100



I KNOW MULTIPLES

2 4 6 8

I KNOW IF A NUMBER IS PRIME OR COMPOSITE

5 IS PRIME

12 IS COMPOSITE

I CAN DIVIDE WITHIN 100

	0	1	2	3	4	5	6	7	8	9	10
=0	0	0	0	0	0	0	0	0	0	0	0
=1	0	1	2	3	4	5	6	7	8	9	10
=2	0	2	4	6	8	10	12	14	16	18	20
=3	0	3	6	9	12	15	18	21	24	27	30
=4	0	4	8	12	16	20	24	29	32	36	40
=5	0	5	10	15	20	25	30	38	40	45	50
=6	0	6	12	18	24	30	36	36	48	54	60
=7	0	7	14	21	28	35	42	42	56	63	70
=8	0	8	16	24	32	40	48	49	64	72	80
=9	0	9	18	27	36	45	54	63	72	81	90
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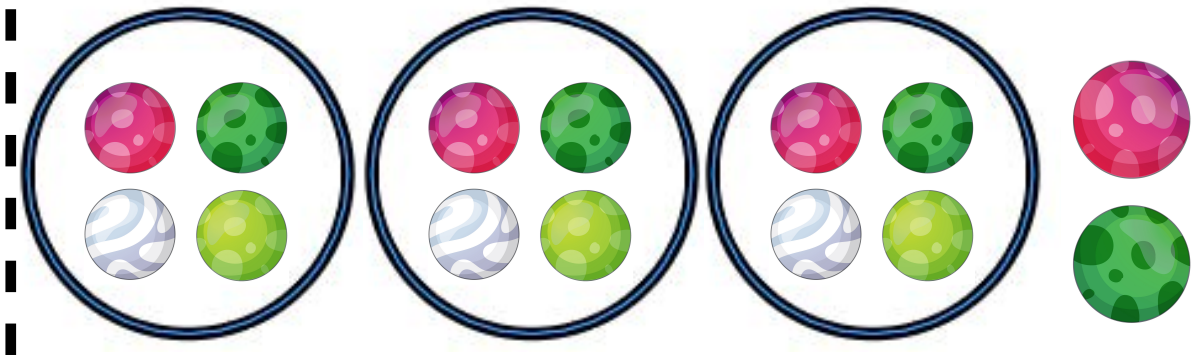

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10x the amount

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$$\frac{1}{10}\frac{1}{10}\frac{1}{10}\frac{1}{10}\frac{1}{10} = \frac{1}{10}\frac{1}{10} + \frac{1}{10}\frac{1}{10}\frac{1}{10}$$

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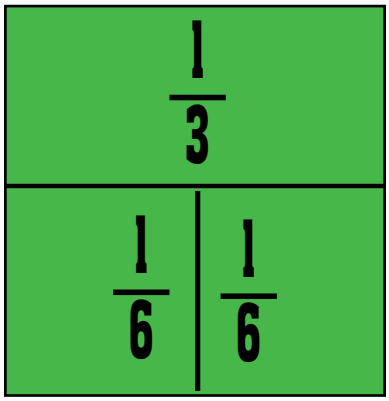
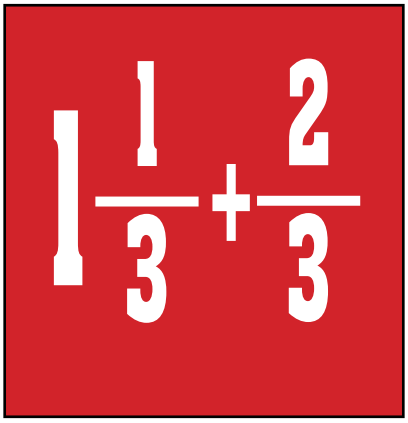
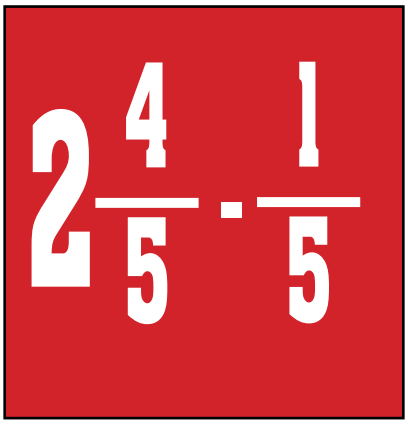


I CAN ADD MIXED NUMBERS WITH LIKE DENOMINATORS



I CAN SUBTRACT MIXED NUMBERS WITH LIKE DENOMINATORS



I CAN ADD FRACTIONS WITH LIKE DENOMINATORS

$$\frac{1}{10} + \frac{3}{10}$$

I CAN SUBTRACT FRACTIONS WITH LIKE DENOMINATORS

$$\frac{5}{10} - \frac{4}{10}$$

I CAN SOLVE ADDITION FRACTION WORD PROBLEMS BY USING VISUAL FRACTION MODELS AND EQUATIONS TO REPRESENT THE PROBLEM.

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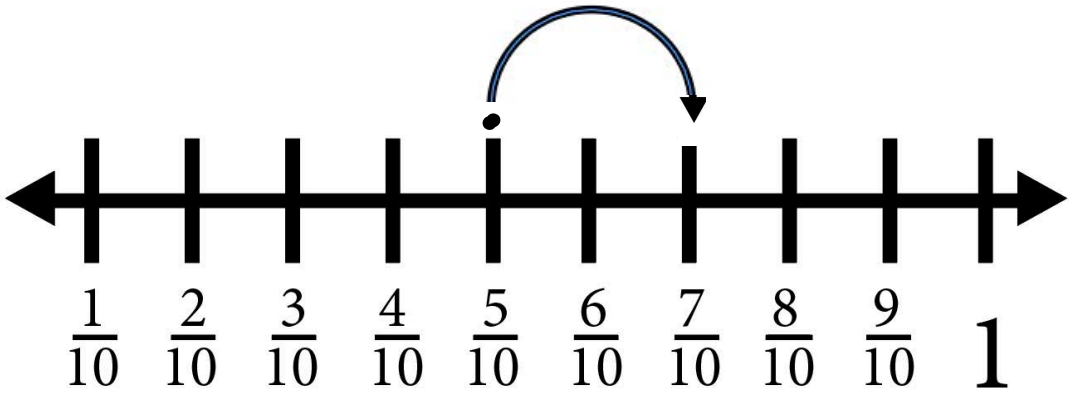
HOW FAR DID HE RUN?



I CAN SOLVE SUBTRACTION

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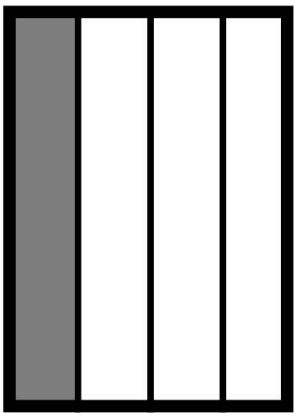
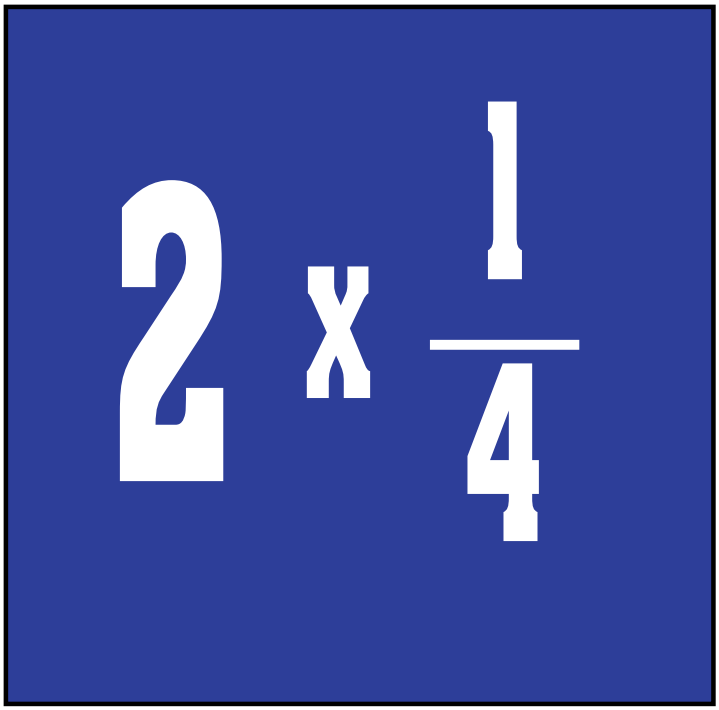
HOW MUCH IS LEFT?



I CAN MULTIPLY A FRACTION BY A WHOLE NUMBER



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MARY RAN 1/4 OF A MILE FOR 3 DAYS. HOW FAR DID SHE RUN?

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

I CAN UNDERSTAND DECIMALS

I CAN EXPRESS A DENOMINATOR 10 AS AN EQUIVALENT FRACTION WITH DENOMINATOR 100, AND USE THIS TECHNIQUE TO ADD TWO FRACTIONS WITH RESPECTIVE DENOMINATORS 100

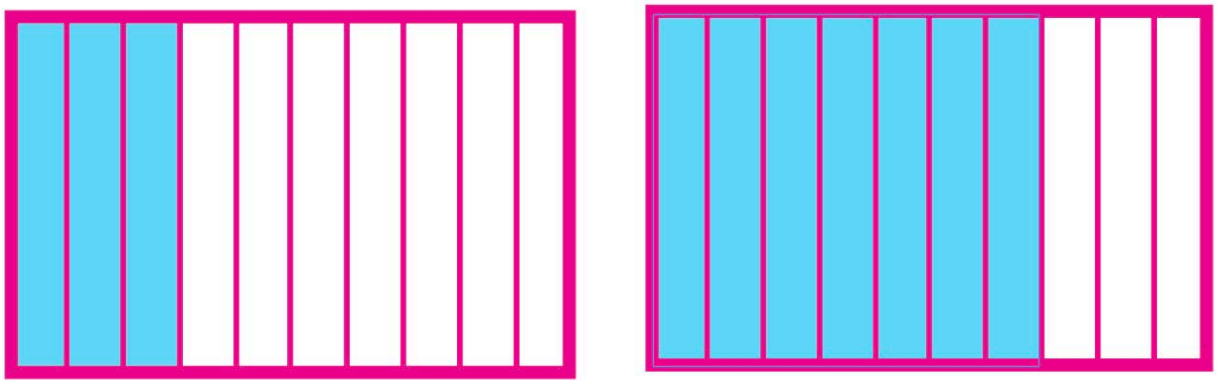
$$\frac{2}{10} = \frac{20}{100}$$

I CAN USE DECIMAL NOTATION FOR FRACTIONS WITH DENOMINATORS 10 AND 100

$$.10 = \frac{1}{10}$$

I CAN COMPARE 2 DECIMALS TO HUNDREDTHS BY REASONING ABOUT THEIR SIZE.

$.3 > .7$



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About the Dr. Nicki Newton

Dr. Nicki Newton is an education consultant who works with schools and districts around the country and Canada on k-8 math curriculum. She has taught elementary school, middle school, and graduate school. Dr Nicki has an Ed.M. and an Ed.D from Teachers, College Columbia University. She is greatly interested in teaching and learning practices around the world and has researched education in Denmark, Guatemala and India. She has written several books, including being a part of the curriculum team for the new McGraw Hill Reveal Math series. She is currently working on a book about counting.

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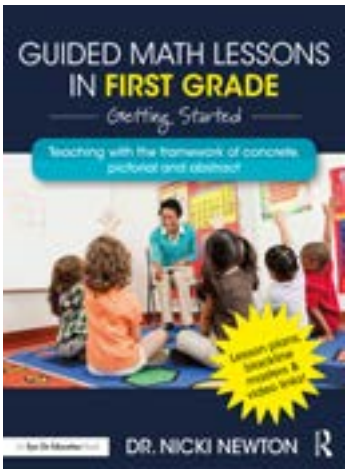
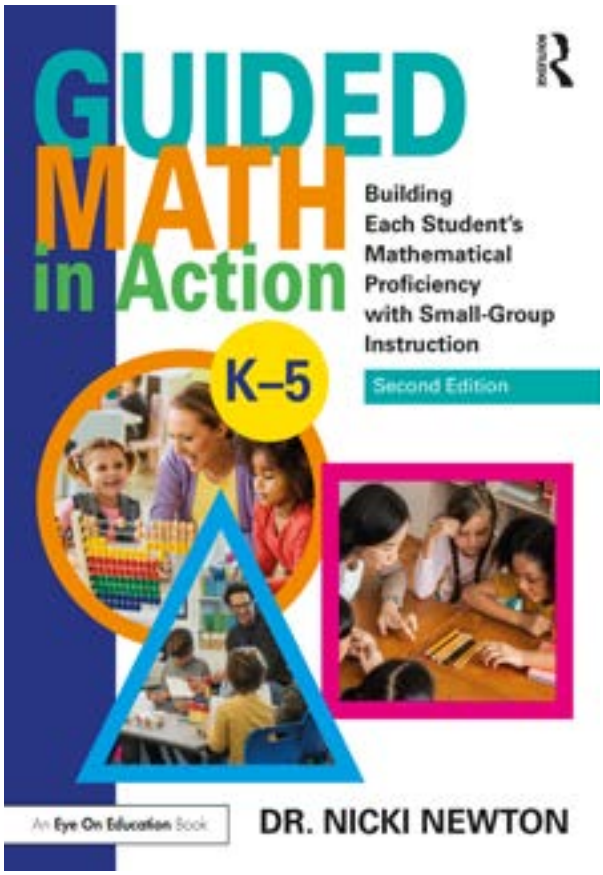
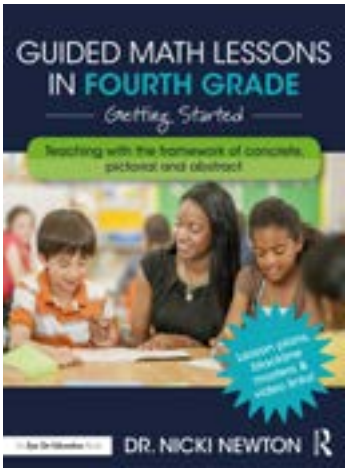
Contact her at drnicki7@gmail.com







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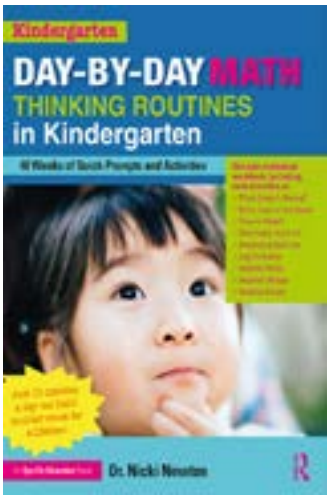
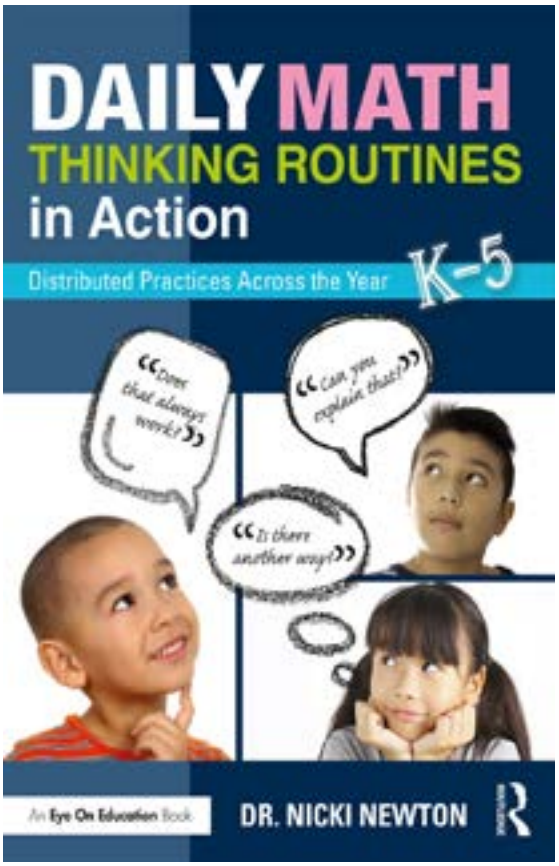
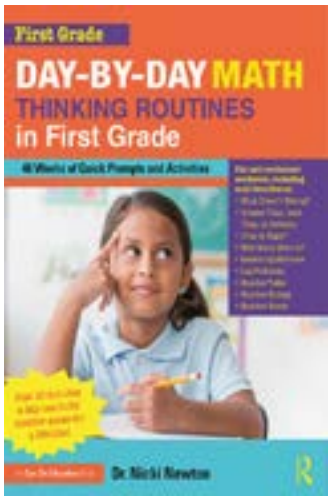
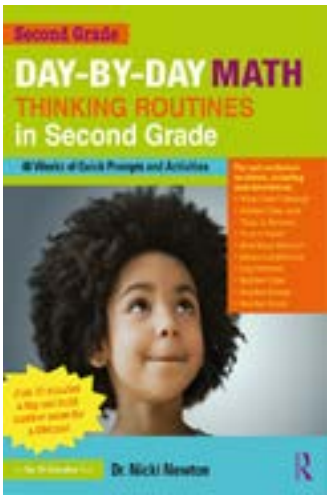
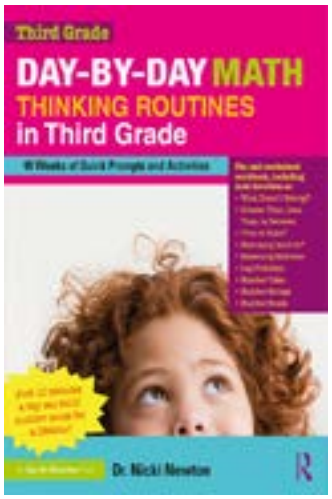
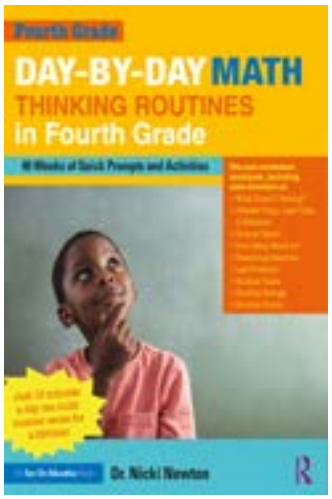


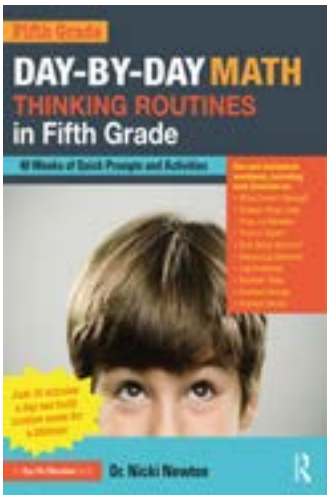




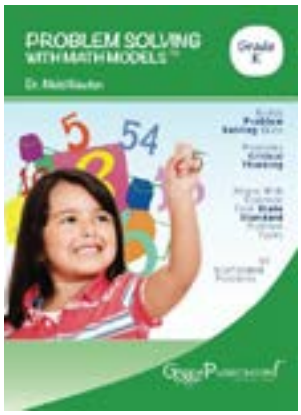


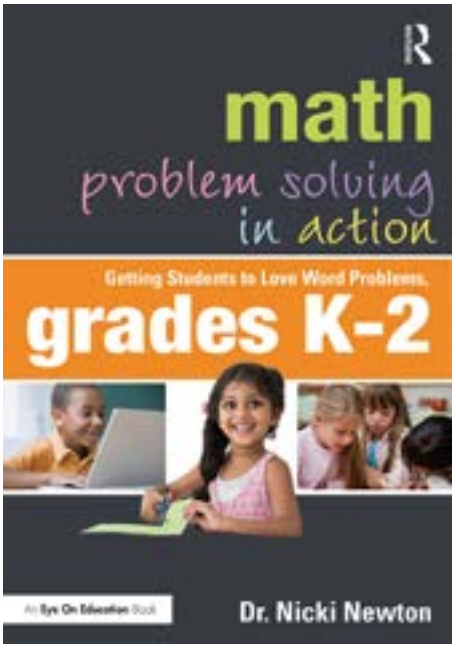


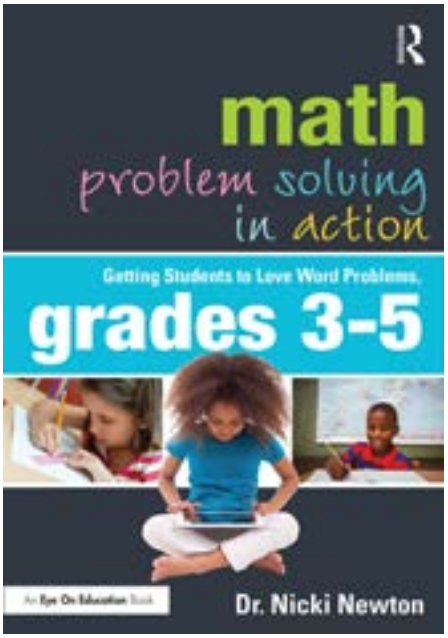


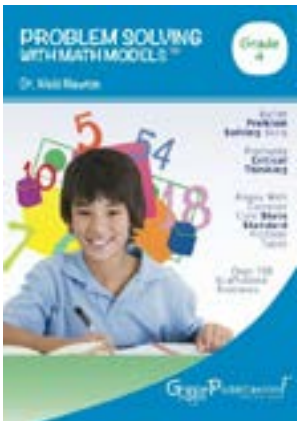


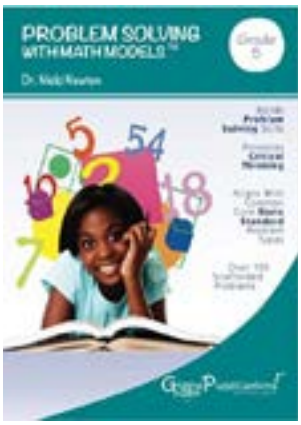
Jump Start Your Problem Solving!



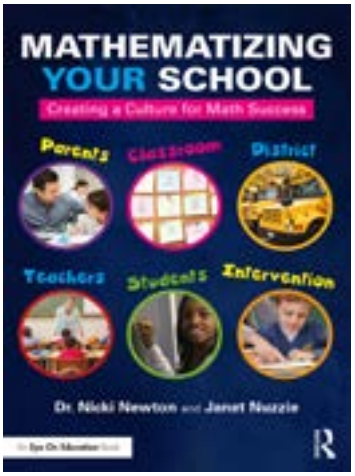


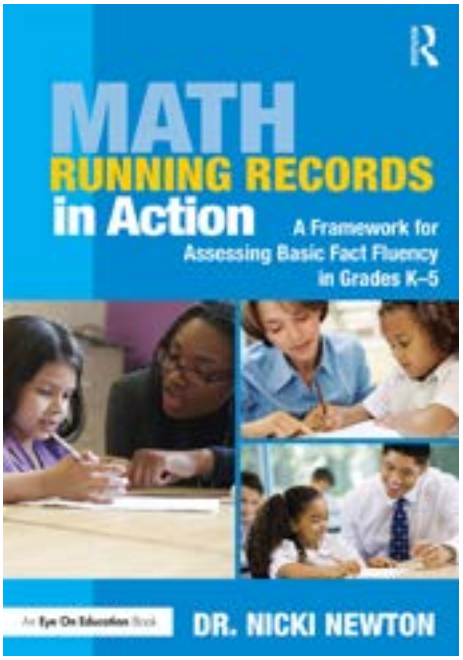


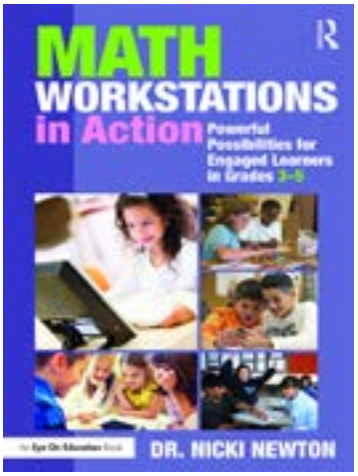


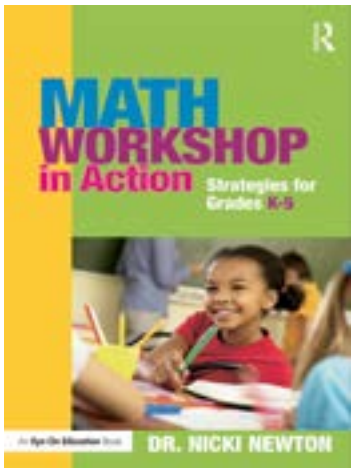


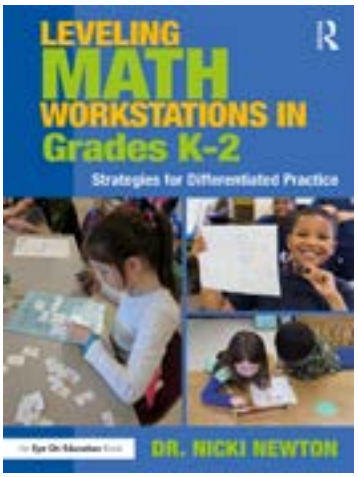
Jump Start Your Math Workshop!

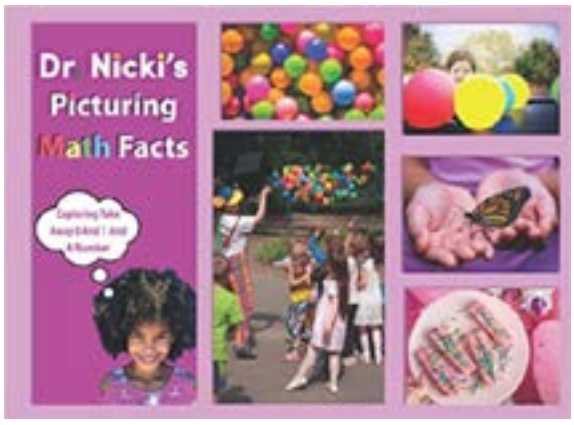


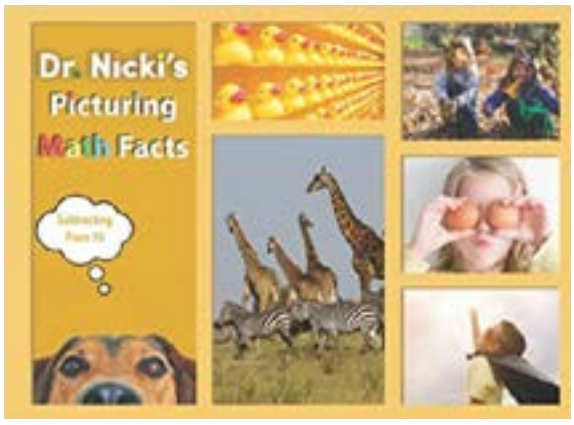












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