

1. Accurately adds multi-digit whole numbers.

$$\begin{array}{r} 1 1 \\ 3,815 \\ + 1,647 \\ \hline 5,462 \end{array}$$

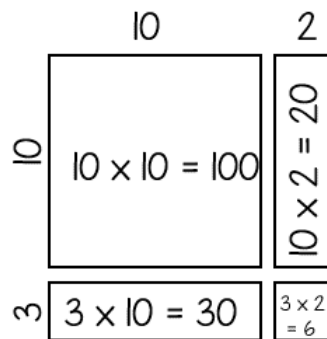
5 ones + 7 ones = 12 ones. Regroup 10 ones into 1 ten and record that in the tens place.
1 ten + 4 tens, + 1 (regrouped) ten = 6 tens
8 hundreds + 6 hundreds = 14 hundreds. Regroup 10 hundreds into 1 thousand and record it in the thousands place.
3 thousands + 1 thousand + 1 (regrouped) thousand = 5 thousands.

2. Accurately subtracts multi-digit whole numbers.

$$\begin{array}{r} 10 \\ 1 \cancel{0} 14 \\ 6, \cancel{2} \cancel{1} 4 \\ - 2,147 \\ \hline 4,067 \end{array}$$

4 ones - 7 ones requires us to open 1 ten. We now have 0 tens left, but 14 ones. Now I can do 14 ones - 7 ones = 7 ones.
0 tens - 4 tens requires us to open 1 hundred. We now have 1 hundred left, but 10 tens.
10 tens - 4 tens = 6 tens
1 hundred - 1 hundred = 0 hundreds
6 thousands - 2 thousands = 4 thousands

3. Accurately computes products of multi-digit whole numbers.



Area Model

12 x 13 =

$$\begin{array}{r} 100 \\ 20 \\ 30 \\ + 6 \\ \hline 156 \end{array}$$

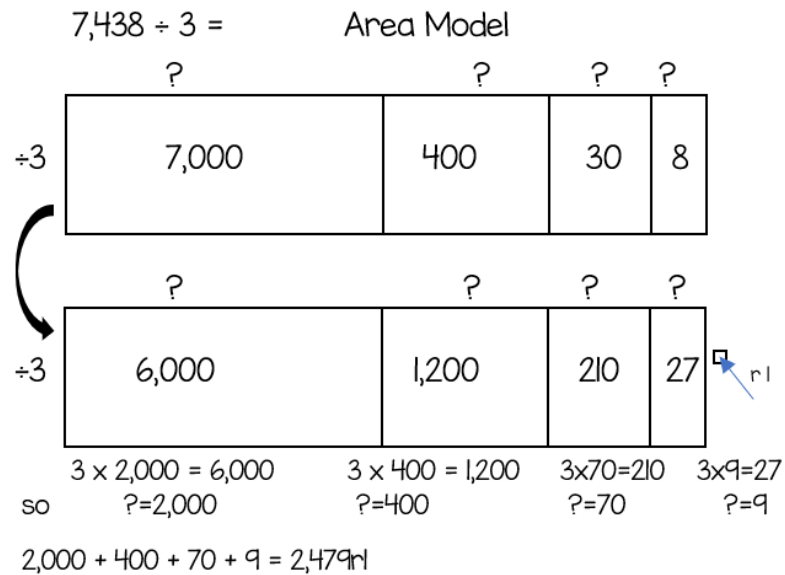
Partial Products 12 x 13 =

$$\begin{array}{r} 12 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \times 2 = 6 \\ 3 \times 1 \text{ ten} = 30 \\ 1 \text{ ten} \times 2 = 20 \\ \underline{1 \text{ ten} \times 1 \text{ ten} = 100} \\ 156 \end{array}$$

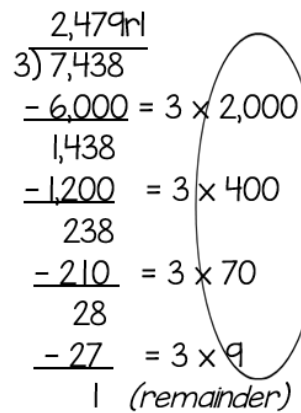
*Grade 5
Standard:
Traditional
Algorithm*

$$\begin{array}{r} 12 \\ \times 13 \\ \hline 36 \\ + 120 \\ \hline 156 \end{array}$$

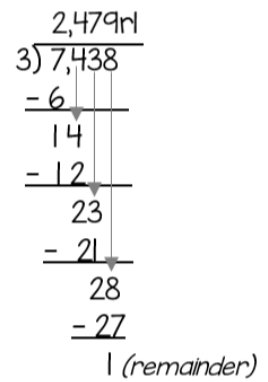


4. Accurately computes quotients of multi-digit whole numbers with one-digit divisors.

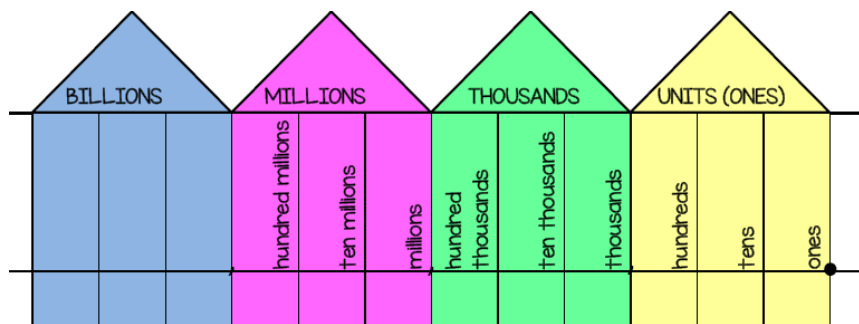
Partial Quotients



(Gr 6 Standard: Traditional Algorithm)

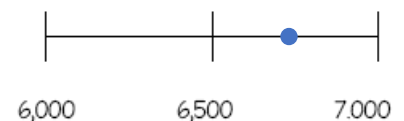


5. Applies place value understanding with multi-digit whole numbers



$43,602,312 =$ Forty-three million, six hundred three thousand, three hundred twelve $= 40,000,000 + 3,000,000 + 600,000 + 2,000 + 300 + 10 + 2$

6,742 rounded to the nearest thousand is 7,000 because 6,742 is over the half-way point, or closer to 7,000



6. Fluently multiplies up to 12 x 12 with automaticity

Student can orally state or write the product (answer to a multiplication equation) within 3 seconds.

7. Fluently divides numbers up to 144 with automaticity

Student can orally state or write the quotient (answer to a division equation) within 3 seconds

$$\frac{4}{8} + \frac{1}{8} = \frac{5}{8}$$

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

8. Accurately adds and subtracts fractions, including those greater than one whole

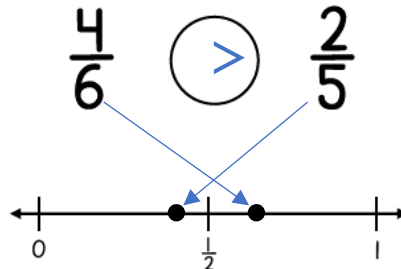
$$\left(\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}\right) + \frac{1}{8} = \frac{5}{8}$$

$$\frac{3}{3} + \frac{1}{3} = \frac{4}{3} \rightarrow \frac{4}{3} - \frac{2}{3} = \frac{2}{3}$$

9. Accurately generates equivalent fractions

$$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12} \quad \frac{5}{10} \div \frac{5}{5} = \frac{1}{2}$$

10. Accurately compares and orders fractions



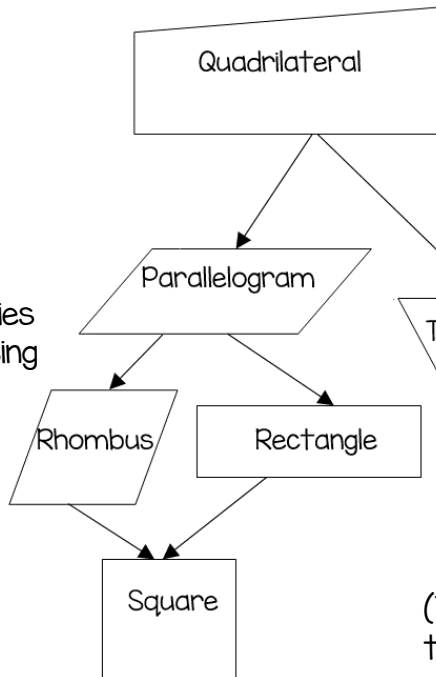
11. Understands decimal notation and compares decimals

$3.25 = 3 + 0.20 + 0.05 =$ "Three and twenty-five hundredths"
 3.25 can be represented by 3 ones, 2 tenths, and 5 hundredths.

$1.8 = 1.80 \rightarrow$ because $.80$ (80 hundredths) = $.8$ (8 tenths)
 $1.8 > 1.42 \rightarrow$ because both numbers have 1 one, but 1.8 has 8 tenths while 1.42 only has 4 tenths.

Sample Geometry vocabulary:

- A **quadrilateral** is a 2-dimensional (flat), closed-figure with exactly 4 sides.
- A **trapezoid** is a quadrilateral with exactly one set of parallel sides.
- A **parallelogram** is a quadrilateral with 2 sets of parallel sides.
- A **rhombus** is a parallelogram with 4 equal sides
- A **rectangle** is a parallelogram with 4 right angles and with opposite sides equal
- A **square** has 4 right angles and 4 equal sides, which includes its' opposite sides being equal. So a square is a specific type of a rectangle.

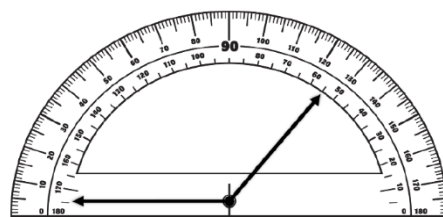


12. Accurately classifies geometric shapes using attributes

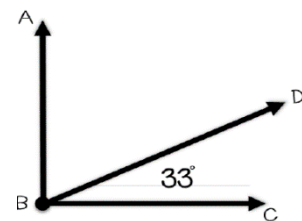
(Think Pets. A golden retriever is a specific type of retriever, which is a specific type of dog, which is a specific type of pet, which is a specific type of animal, etc...)

13. Understands the concept of angles and angle measures

Students can use a protractor to determine this is a 125° angle

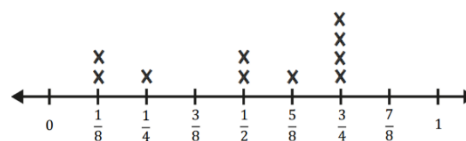


If $\angle ABC = 90^\circ$, then we can use $\angle DBC$ to find the missing angle measurement of $\angle ABD$ is 57°



14. Represents and interprets data

Amount of rain (in inches) per city



X = 1 city

If each city gets another $\frac{1}{2}$ inch of rain, how many cities will have greater than 1 inch of rain?

15. Accurately solves real world measurement problems including area and perimeter

Ex. Nadia is going to replace the wood around the front window of her house. If the dimensions of the window are 8 feet by 4 feet, how many feet of wood will Nadia need?

Ex. Jason wants to buy an outdoor rug for his rectangular patio. If his patio measures 9 ft by 12 feet and Jason wants the whole patio covered, how many square feet must his rug cover?

Ex. Ethan ran half of a mile in 6 minutes and 14 seconds. If he continues with the same pace, how many seconds would it take Ethan to run a full mile?

16. Accurately solves multi-step problems

Ex. Chalam paints pictures to sell at shows. She charges \$8 for a large painting and \$6 for a small painting. This year she hopes to sell 250 large paintings and 125 small paintings. If she reaches her goal, how much money will she make in all?

Ex. A chocolate factory made 5,985 candy bars. After inspection, 90 of the bars were found to be defective and could not be shipped out. The factory will ship the good candy bars to 9 different stores. If the same amount is shipped to each store, how many will each store receive?