The background is a dark gray color filled with various geometric patterns and shapes. These include a grid of small dots in the top left, a large blue circle in the top right, a 3D cube on the right, a 3D L-shape in the middle, a 3D pyramid on the right, a 3D cross in the bottom, and various other shapes like circles, rectangles, and triangles with different patterns like stripes and dots. The text is centered over this background.

MATH STRATEGIES FOR THIRD GRADE

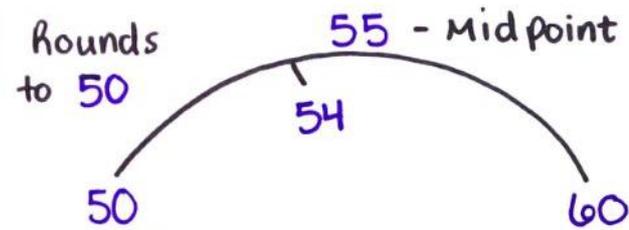
A PARENT'S GUIDE TO THIRD GRADE STANDARDS

ROUNDING TO NEAREST 10 AND 100

(TO THE NEAREST TEN)

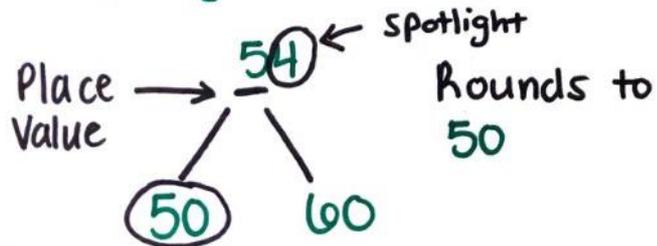
number: 54

Hill Strategy



If the number is to the left of the Midpoint, leave it alone. If it is to the right, go up.

Spotlight Strategy

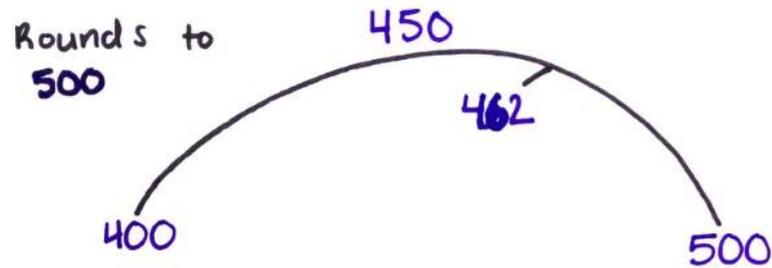


- ① Find place value & underline
- ② Circle the number to the right
- ③ If number is 4 or less, leave it alone. If 5 or higher, go up.

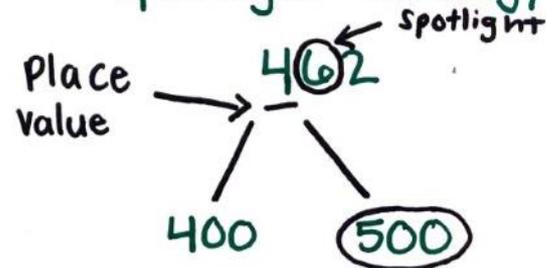
(TO THE NEAREST HUNDRED)

number: 462

Hill Strategy



Spotlight Strategy



Rounds up to 500

ADDITION WITHIN 1,000

Equation: $328 + 297 =$
 Expanded Form:

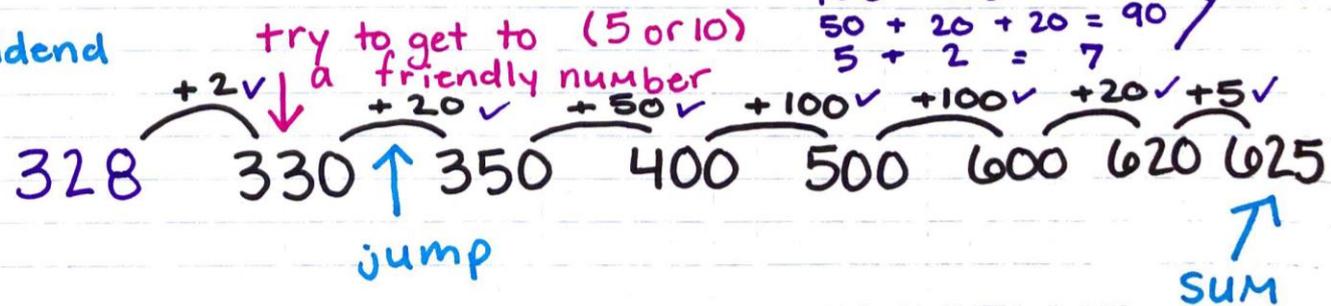
addends	328	$300 + 20 + 8$
	+ 297	$200 + 90 + 7$
sum	625	500 110 15 500 20 5 500 20 5

Place Value:

328	← addends
+ 297	←
500	H (Hundreds)
110	T (Tens)
15	O (ones)
625	← sum

Open Number Line:
 $328 + 297 = 625$

Start with the bigger addend



Add the jumps:

$100 + 100 = 200$	} 297
$50 + 20 + 20 = 90$	
$5 + 2 = 7$	

SUBTRACTION WITHIN 1,000

Open Number Line

$$813 - 367$$

Solve by "adding up to subtract"

$$367 \xrightarrow{+3} 370 \xrightarrow{+30} 400 \xrightarrow{+400} 800 \xrightarrow{+10} 810 \xrightarrow{+3} 813$$

$$\begin{array}{r} 400 \\ 40 \\ + 6 \\ \hline 446 \end{array} \quad 367 + \boxed{446} = 813$$

missing addend

$$446 \xrightarrow{-4} 450 \xrightarrow{-50} 500 \xrightarrow{-300} 800 \xrightarrow{-13} 813$$

$$813 - 367 = \boxed{446} \leftarrow \text{difference}$$

"Add up to subtract"

$$\begin{array}{r} 367 + 3 = 370 \\ 370 + 30 = 400 \\ 400 + 400 = 800 \\ 800 + 10 = 810 \\ 810 + 3 = 813 \\ \hline 446 \end{array}$$

Expanded Form

$$\begin{array}{r} 813 = 700 + 100 + 13 \\ - 367 = 300 + 60 + 7 \\ \hline 446 = 400 + 40 + 6 \end{array}$$

Get friendly,
Stay friendly,
then the leftovers

MULTIPLICATION

Tower 7×8 or $56 \div 8$

x	•••••
1	8
2	16
3	24
4	32
5	40
6	48
7	56

x	•••••
5	40
6	48
7	56

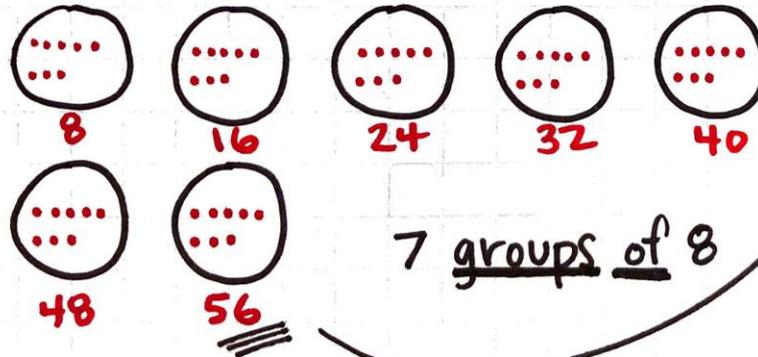
Shortcut for larger factors... find a friendly fact you know

Repeated Addition

The first $\leftarrow 7 \times 8 \rightarrow$ The second factor tells you what the addend is
you the number of addends

$$\underbrace{8} + \underbrace{8}_{16} + \underbrace{8}_{24} + \underbrace{8}_{32} + \underbrace{8}_{40} + \underbrace{8}_{48} + \underbrace{8}_{56} = \underline{56}$$

Equal Groups $7 \times 8 =$



The total number inside each group is the product
The product of 7×8 is 56.

DIVISION

Tower

$7 \times 8 \text{ or } 56 \div 8$

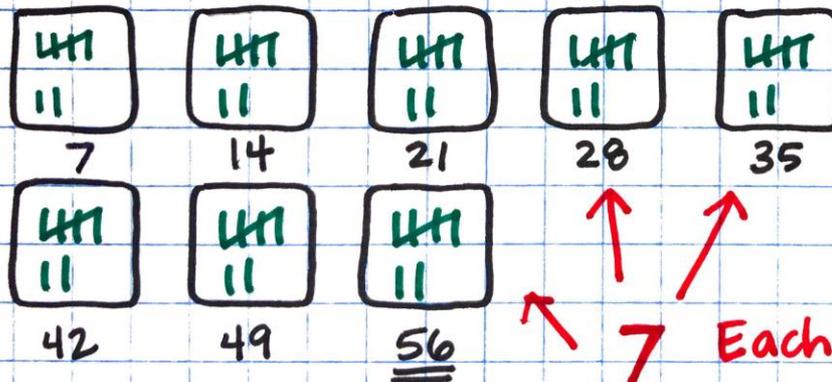
x
1	8
2	16
3	24
4	32
5	40
6	48
7	56

x
5	40
6	48
7	56

Shortcut for larger factors... find a friendly fact you know

Equal Groups

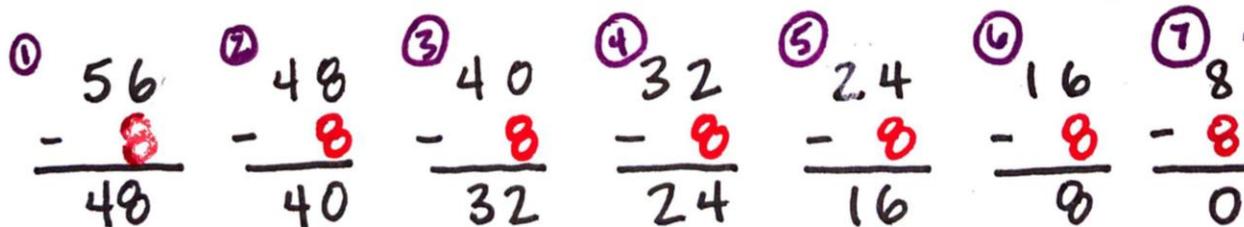
$56 \div 8 = \text{how many each group gets}$



It's like dealing cards!

7 Each group gets 7.

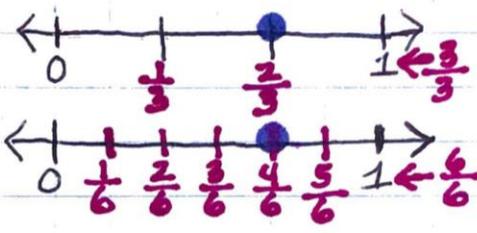
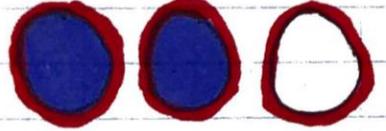
Dividend: $\leftarrow 56 \div 8 \rightarrow$ Divisor: amount to be subtracted repeatedly
Total amount



Repeated Subtraction

Your quotient will be the number of times you subtracted 8 from 56 to reach 0. $56 \div 8 = \underline{7}$

Representing a Fraction In Multiple Ways

	
<p>Equal Parts</p>	<p>Number Line</p>
<p>$\frac{2}{3}$</p>  <p>$\frac{4}{6}$</p> 	<p>$\frac{2}{3}$</p> <p>$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$</p> <p>$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{4}{6}$</p>
<p>Parts of a Group</p>	<p>Equation</p>

$\frac{2}{3}$ ← numerator
 3 ← denominator

3 = $\frac{6}{2}$ equivalent fraction
 ↑
 whole number

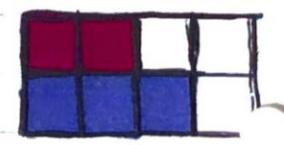
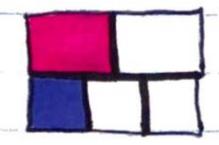


FRACTIONS

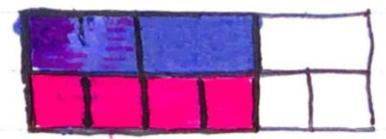
Comparing Fractions

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

$\frac{2}{4} < \frac{3}{4}$



$\frac{2}{3} = \frac{4}{6}$ equivalent fractions



AREA

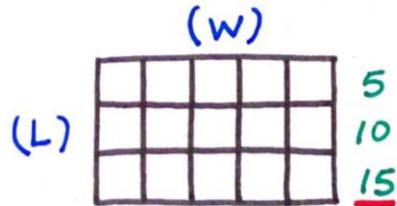
Formula:

$$A = L \times W$$

Area = The number of square units that covers a shape or figure.

Square Unit = A unit of measurement that determines the area of a figure (14 squared feet or 14 ft²)

Tiling = When you fit individual tiles together with no gaps or overlaps to fill a space



Count the boxes/units!

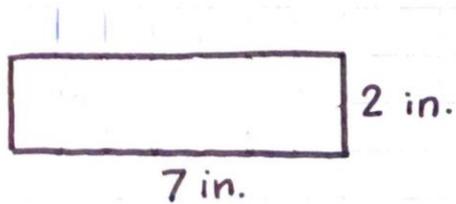
$$\text{Area} = 15 \text{ square units}$$

or Multiply the length times width.

$$A = L \times W$$

$$A = 3 \times 5$$

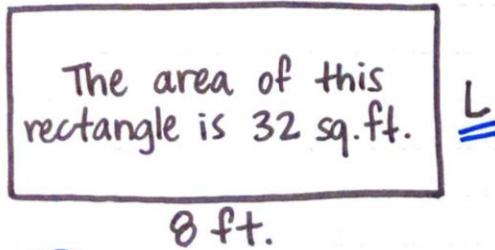
$$A = 15 \text{ square units}$$



$$A = L \times W$$

$$A = 2 \times 7$$

$$A = 14 \text{ in.}^2$$



Solve for L!

$$A = L \times W$$

$$32 = L \times 8$$

$$32 = \underline{4} \times 8$$

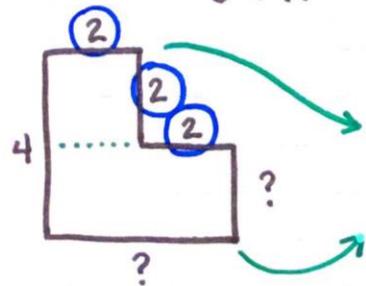
$$\text{or } A \div W = L$$

$$32 \div 8 = L$$

$$32 \div 8 = \underline{4}$$

The length (L) is 4 ft.

Notice the L is NOT squared.



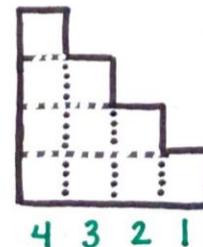
Find the area!

$$2 \times 2 = \underline{4}$$

$$2 \times 4 = \underline{8}$$

$$8 + 4 = 12$$

$$A = 12 \text{ u}^2$$



Tiling!

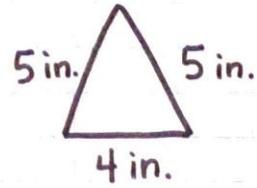
Add up all of the tiles.

$$A = 4 + 3 + 2 + 1$$

$$A = 5 + 5$$

$$A = 10 \text{ units squared}$$

PERIMETER



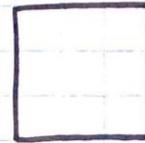
Add up all the sides!

$$5 + 5 + 4$$

$$\quad \vee$$

$$10 + 4 = 14$$

$$P = 14 \text{ in.}$$



8 ft.

If an object is a square, all sides are known because all sides are equal.

$$8 \times \text{number of sides}$$

$$8 \times 4 = 32$$

or

$$8 + 8 + 8 + 8$$

$$\quad \vee \quad \quad \vee$$

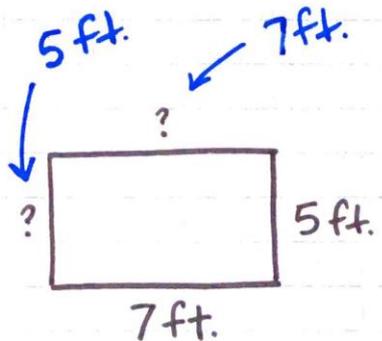
$$16 + 16 = 32$$

$$P = 32 \text{ ft.}$$

Perimeter = The sum of the lengths of the sides of a shape.

Perimeter =

$$L + W + L + W$$



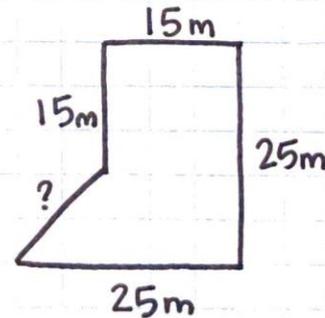
Congruent sides are equal. Therefore, All sides are known in this example.

$$5 + 7 + 5 + 7$$

$$\quad \vee \quad \quad \vee$$

$$10 + 14 = 24$$

$$P = 24 \text{ ft.}$$



$$P = 95 \text{ m}$$

Add the known sides and then subtract from total perimeter to find the unknown side.

$$15 + 15 + 25 + 25$$

$$\quad \vee \quad \quad \vee$$

$$30 + 50 = 80$$

$$95 - 80 = \boxed{15}$$

or

$$80 + \boxed{15} = 95$$

ELAPSED TIME

Missing end time

7:15 $\xrightarrow{4\text{h } 15\text{M}}$?

Missing duration

12:23 $\xrightarrow{?}$ 6:51

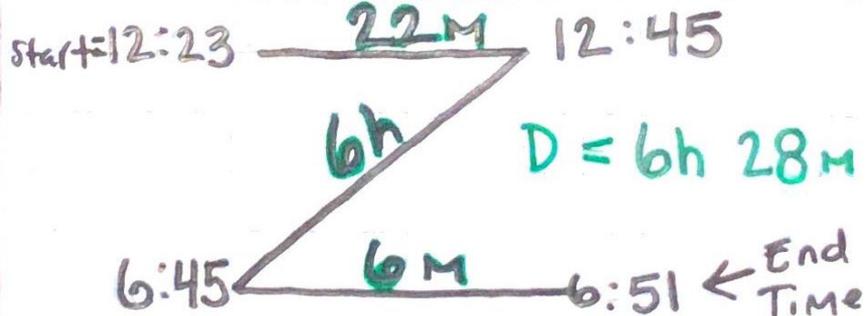
Missing start time

? $\xrightarrow{2\text{h } 6\text{M}}$ 3:25

Mountains, Hills, Pebbles



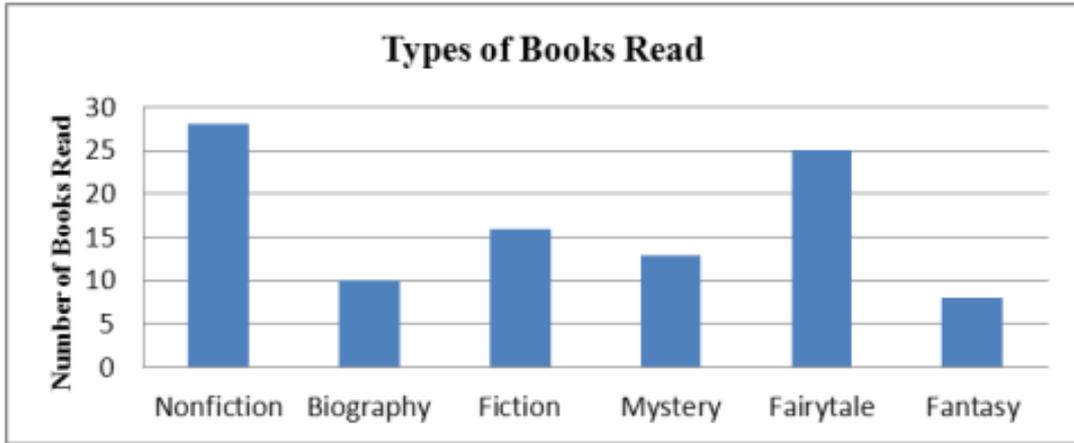
Zoom



T-Chart

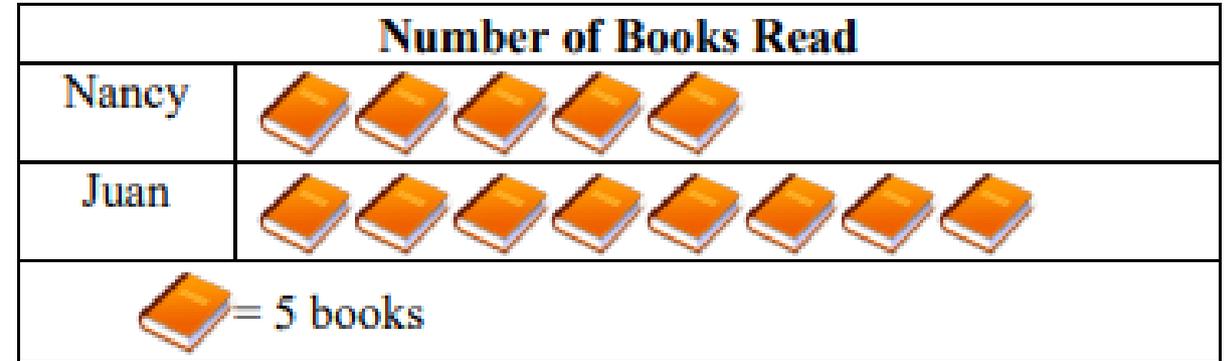
Start	Start	Hour	Min
1:19	3:25	-2h	
End	1:25		-5M
3:25	1:20		-1M
	1:19		
D =		-2h	6M

GRAPHS



Bar graph

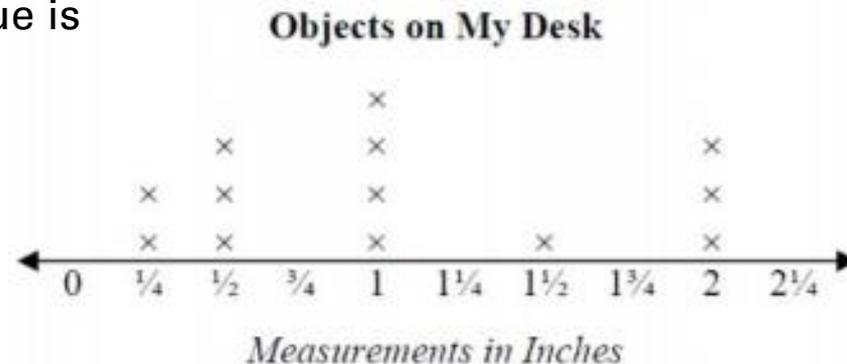
A Graph drawn using rectangular bars to show how large each value is



Pictograph

A type of graph that uses symbols and pictures to represent data

Scale = A series of numbers placed at fixed, or equal, distances.



Line Plot

Line plots who data on a number line with an x or other marks to show frequency

A key is used to identify the number of categories present n a graph. It is also called a legend.

WORD PROBLEMS (RACE)

Answer Sentence

- Write an equation (numbers)
- Restate question (words)

Explain your answer

- What I know (facts & operation) (R)
- What I did (strategy) (C)
- What I found (answer question & summarize) (A)

Solve the following word problem using the RACE strategy!

Standard: OA3 Uses strategies to solve multiplication word problems.

There are 7 parking spots per block. How many parking spots are in 6 blocks?

Answer Sentence: There are 42 parking spots in six blocks.

Equation: ~~6~~ $6 \times 7 = 42$

Choose your Strategy

7 14 21 28 35 42

Explain your answer: I know there are 7 parking spots in each block and there are 6 blocks. I knew to multiply because everytime you drive there are 7 parking spots and you keep on adding. I used equal groups. I first started with 6 circles and 7 tally's in each and I counted 7, 14, 21, 28, 35, 42. There are 42 parking spots.

Read the Problem

- Circle important info
- Underline the question
- Eliminate extraneous info

Choose a Strategy

- Show all of your work