# MATH STRATEGIES FOR THIRD GRADE

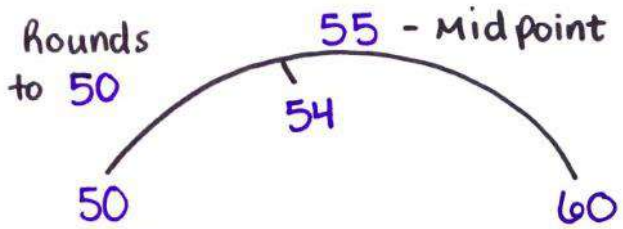
## A PARENT'S GUIDE TO THIRD GRADE STANDARDS

# ROUNDING TO NEAREST 10 AND 100

## (TO THE NEAREST TEN)

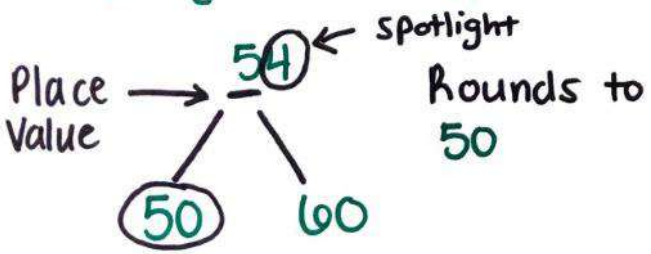
number : 54

### 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

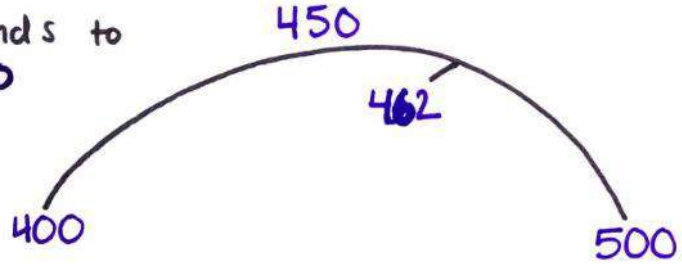



1. Find place value & underline
2. Circle the number to the right
3. If number is 4 or less, leave it alone. If 5 or higher, go up.

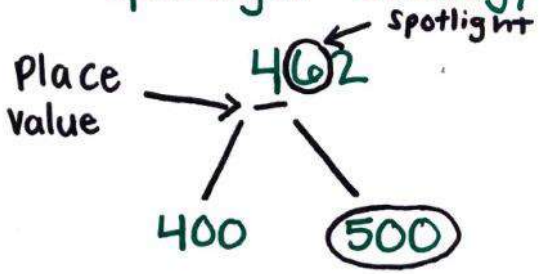
## (TO THE NEAREST HUNDRED)

number : 462

### Hill Strategy

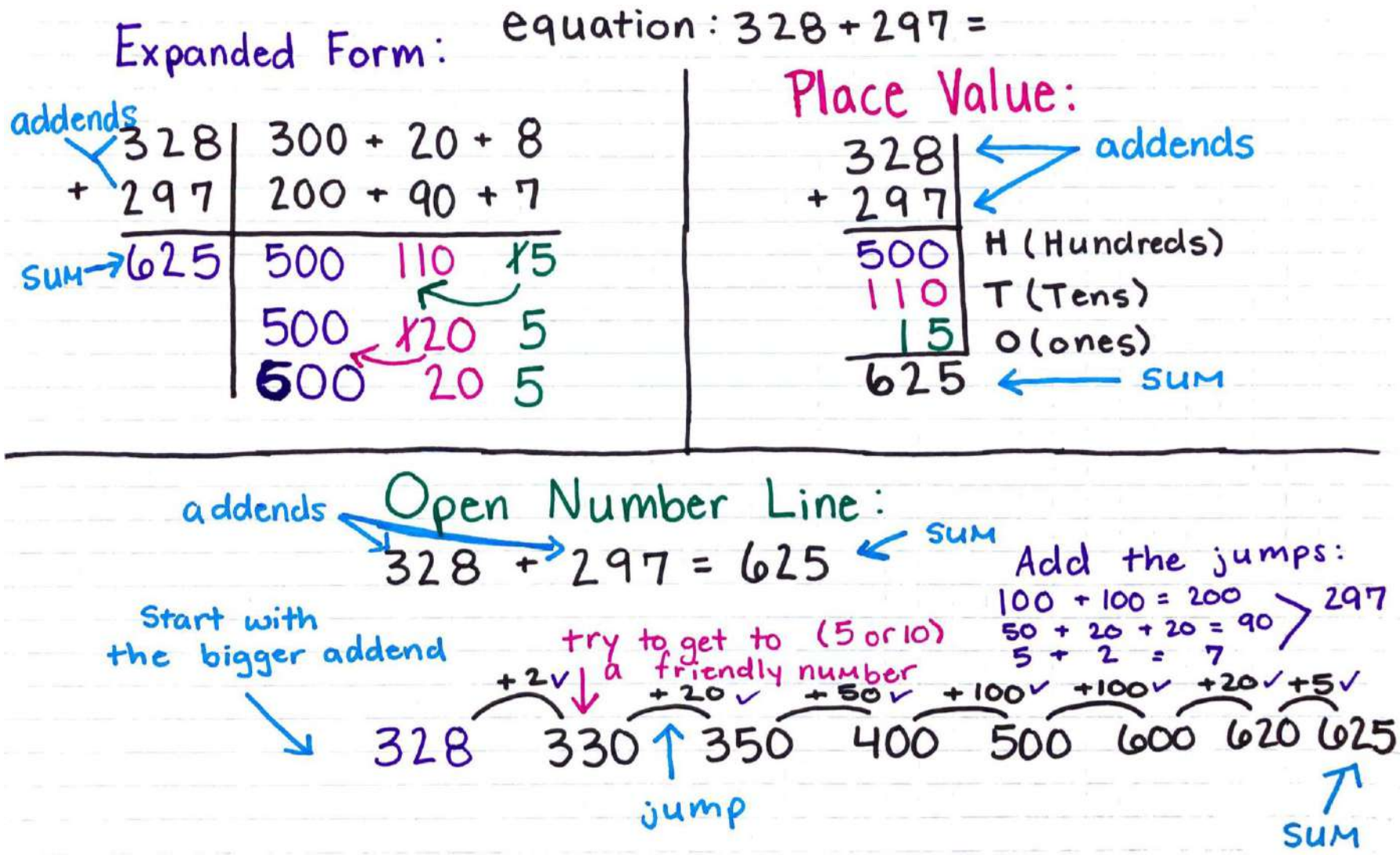



### Spotlight Strategy

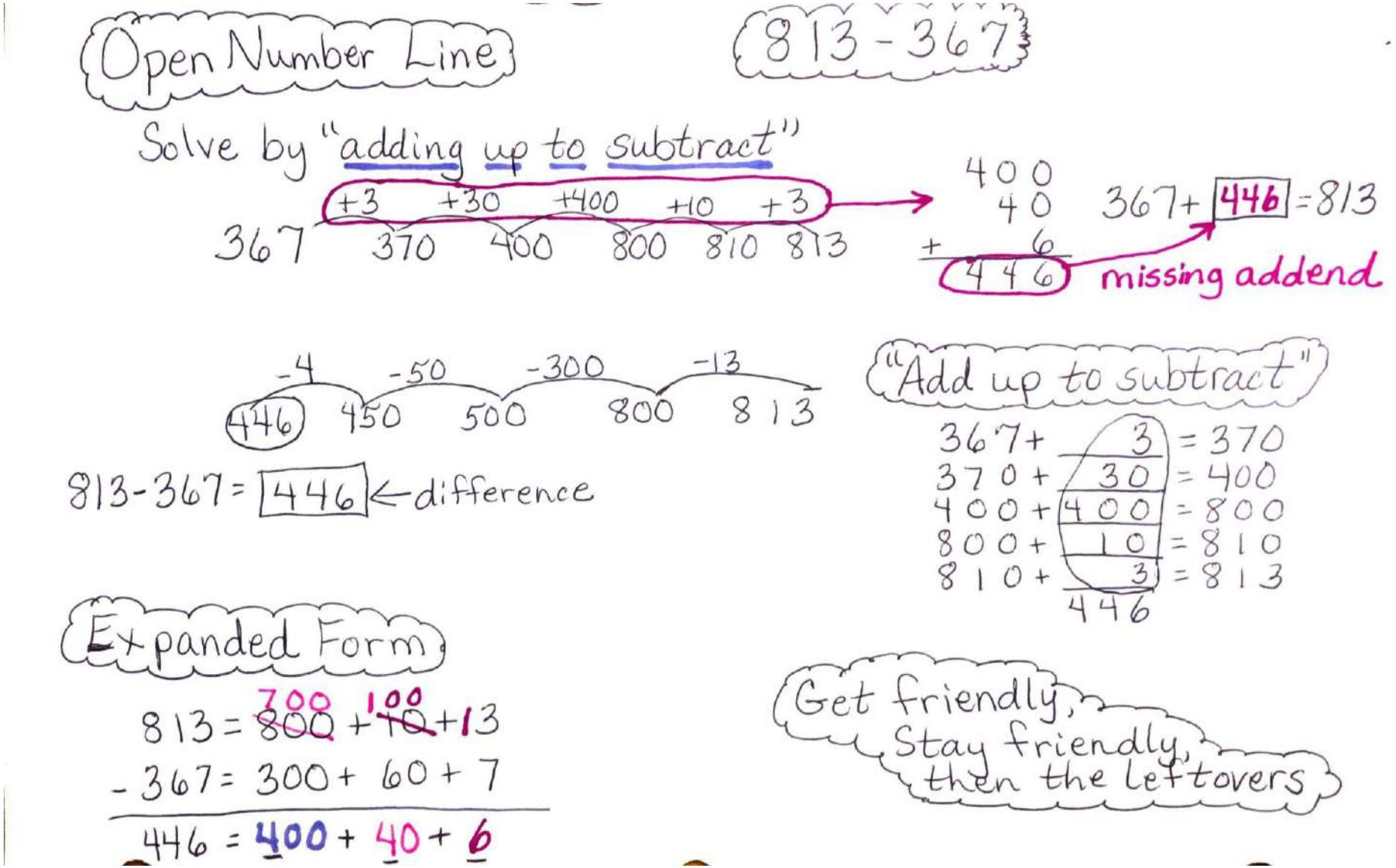



Rounds up to 500

# ADDITION WITHIN 1,000



# SUBTRACTION WITHIN 1,000



# MULTIPLICATION

## Tower

**7×8** or **56÷8**

| × | ●●●●● ●●● |
|---|---|
| 1 | 8 |
| 2 | 16 |
| 3 | 24 |
| 4 | 32 |
| 5 | 40 |
| 6 | 48 |
| 7 | 56 |

| × | ●●●●● ●●● |
|---|---|
| 5 | 40 |
| 6 | 48 |
| 7 | 56 |

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

## Repeated Addition

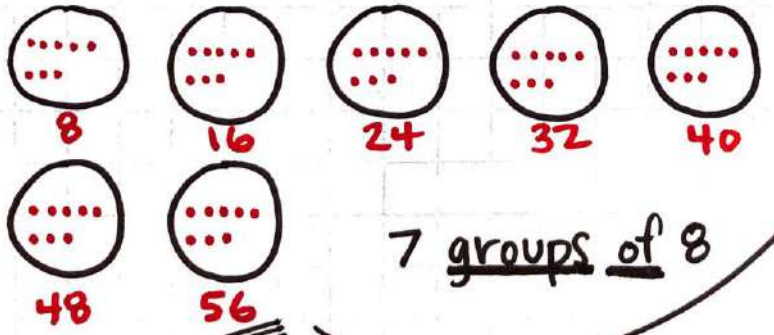
The first factor tells you the number of addends ← **7×8** → The second factor tells you what the addend is

8 + 8 + 8 + 8 + 8 + 8 + 8 = 56

(16, 24, 32, 40, 48)

## Equal Groups

**7×8 =**




7 groups of 8

The total number inside each group is the product

The product of 7×8 is 56.

# DIVISION

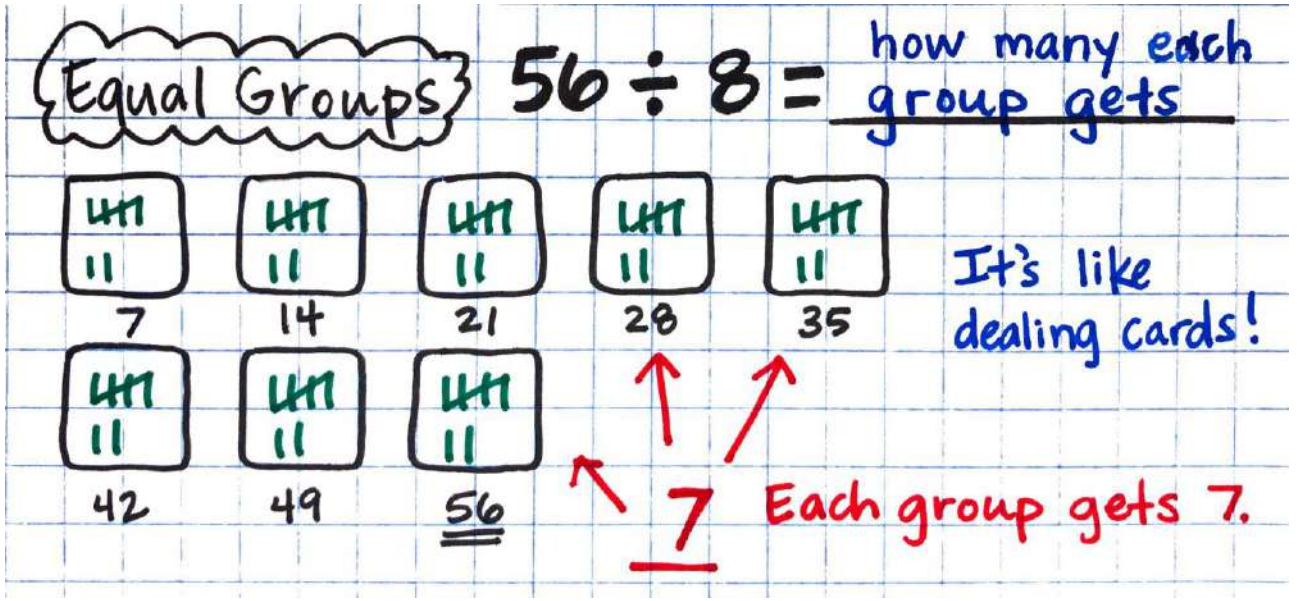
Tower

**7×8** or **56÷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




Dividend: ← **56 ÷ 8** → Divisor: amount to be subtracted repeatedly

Total amount

Repeated Subtraction

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|---|---|---|---|---|---|---|
| 56 | 48 | 40 | 32 | 24 | 16 | 8 |
| − 8 | − 8 | − 8 | − 8 | − 8 | − 8 | − 8 |
| 48 | 40 | 32 | 24 | 16 | 8 | 0 |

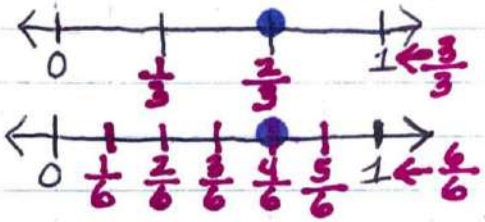
Your quotient will be the number of times you subtracted 8 from 56 to reach 0. 56 ÷ 8 = **7**

# FRACTIONS

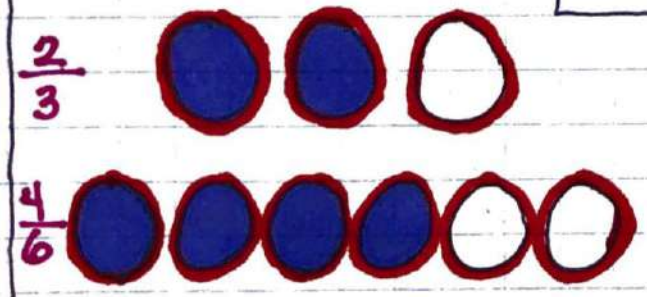
## Representing a Fraction In Multiple Ways

$\frac{2}{3}$

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




Equal Parts | 2/3 | Number Line



$\frac{2}{3}$

$\frac{4}{6}$

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

$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{4}{6}$

Parts of a Group | Equation

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

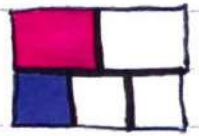
$3 = 6/2$ equivalent fraction

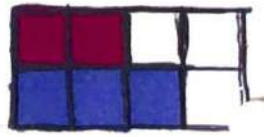
3 ← whole number

## Comparing Fractions

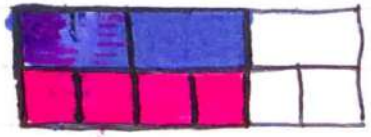
$\frac{1}{2} > \frac{1}{3}$

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





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



# AREA

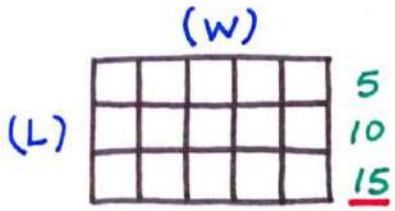
Formula:

$A = L \times W$

**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 $ft^2$)

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




Count the boxes/units!

Area = 15 square units

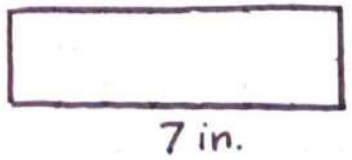
or

Multiply the length times width

$A = L \times W$

$A = 3 \times 5$

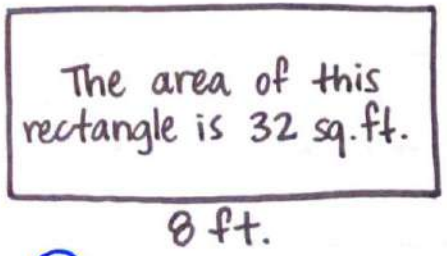
$A = 15$ square units




$A = L \times W$

$A = 2 \times 7$

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




Solve for L!

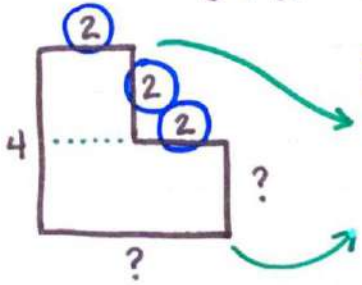
$A = L \times W$ or $A \div W = L$

$32 = L \times 8$ $32 \div 8 = L$

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

The length (L) is 4 ft.

Notice the L is NOT squared.



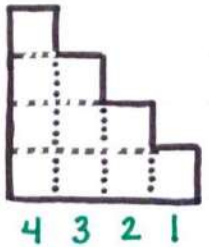

Find the area!

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

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

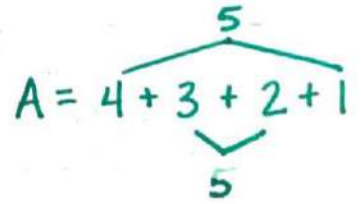
$8 + 4 = 12$

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




Tiling!

Add up all of the tiles.




$A = 5 + 5$

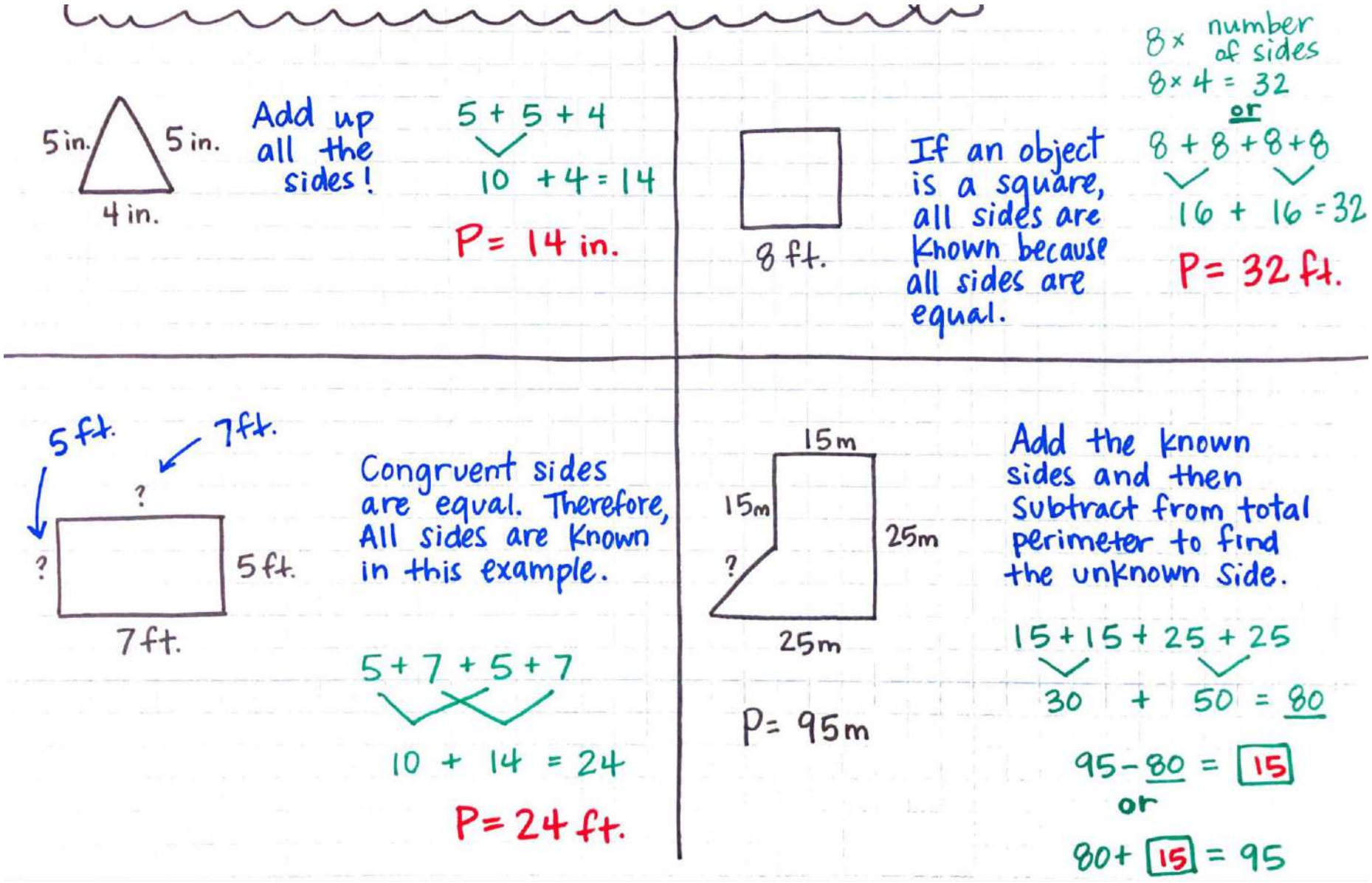
$A = 10$ units squared

# PERIMETER

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

**Perimeter** =

L + W + L + W



# ELAPSED TIME

## Missing end time

7:15 — 4h 15m — ?

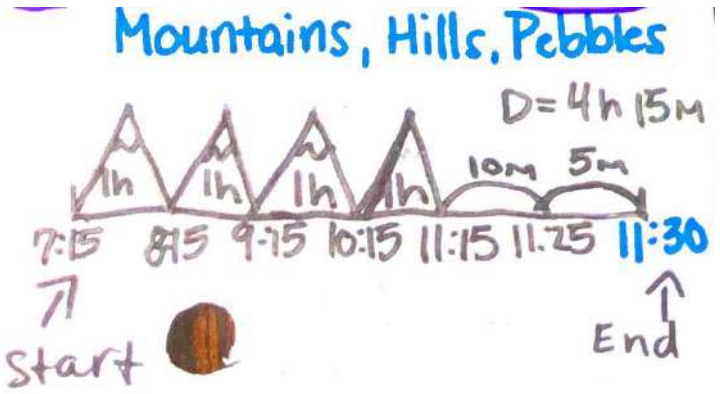
## Missing duration

12:23 — ? — 6:51

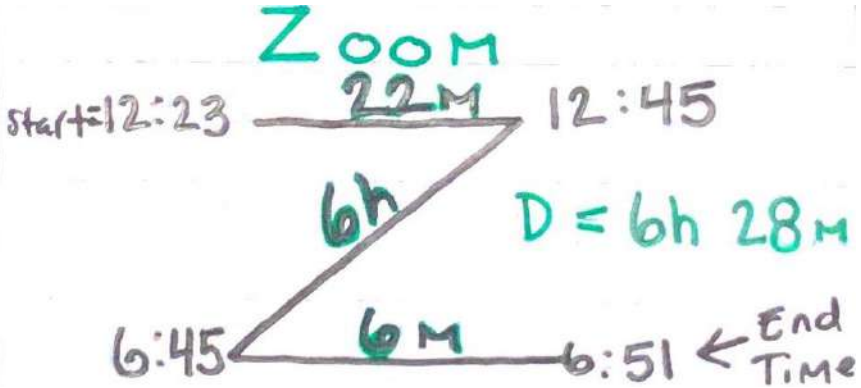
## Missing start time

? — 2h 6m — 3:25

### Mountains, Hills, Pebbles



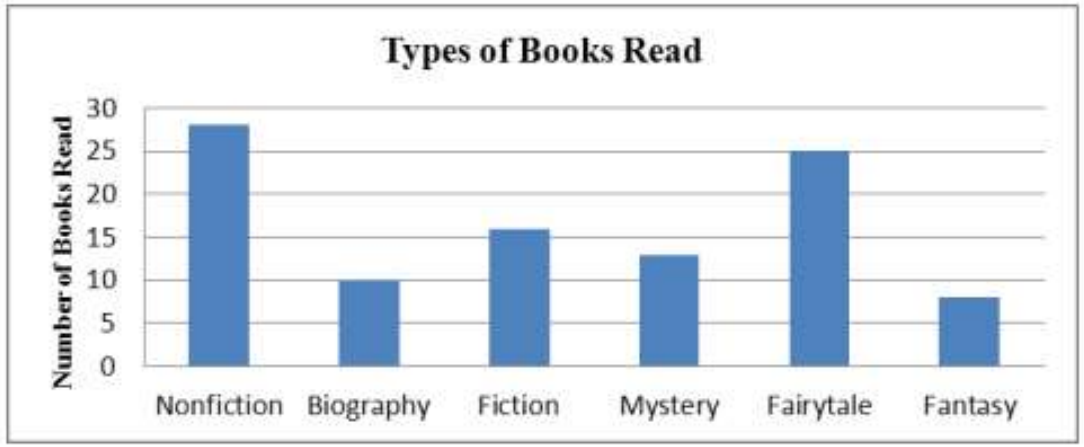

### Zoom




### T-Chart

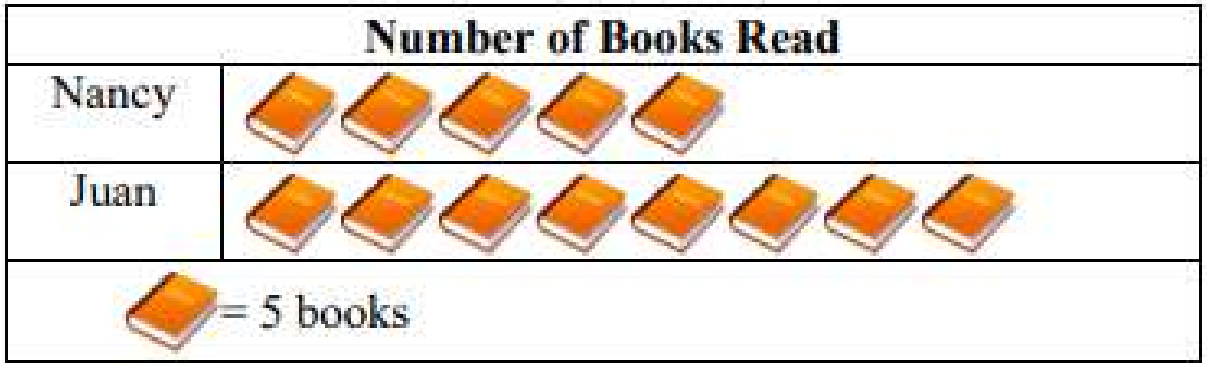
| Start | Start | Hour | Min |
|---|---|---|---|
| 1:19 | 3:25 | -2h | |
| End | 1:25 | | -5m |
| 3:25 | 1:20 | | -1m |
| | 1:19 | | |
| | | D= | -2h 6m |

# GRAPHS



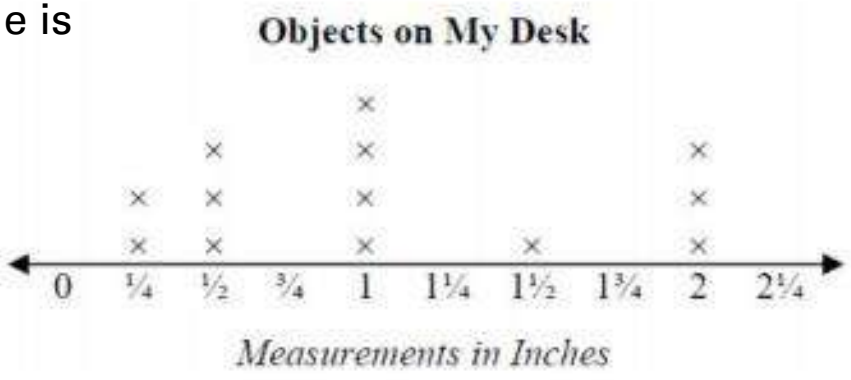

Bar graph

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




Line Plot

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

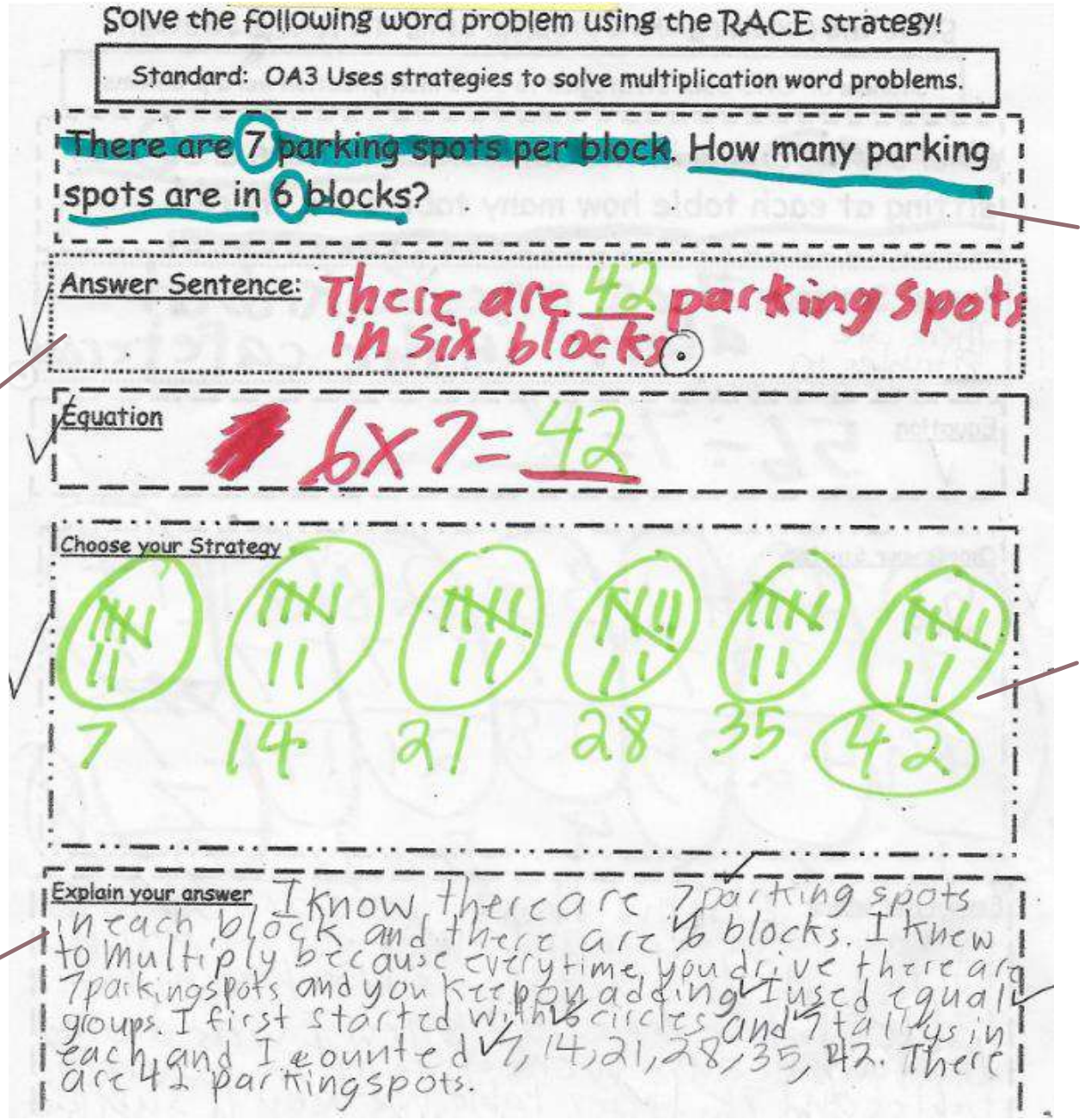
Scale = A series of numbers placed at fixed, or equal, distances.

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

# WORD PROBLEMS (RACE)

**A**nswer Sentence
- Write an equation (numbers)
- Restate question (words)

**E**xplain 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 x 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 tallys in each and I counted 7, 14, 21, 28, 35, 42. There are 42 parking spots.

**R**ead the Problem
- Circle important info
- Underline the question
- Eliminate extraneous info

**C**hoose a Strategy
- Show all of your work