## 6 12.125 numbers $\begin{array}{lll}3 & 1235439.2581 & 0.007\end{array}$

## factor

To find the product, I need to multiply factors.

$$
2 \times 3=6 \quad 15=5 \times 3
$$

## multiple

Multiples of $12-12,24,36,48,60,72$ Multiples of 18-18, 36, 54, 72, 90, 108



## Fundamental Theorem

## of Arithmetic

$6936=2^{3} \cdot 3 \cdot 17^{2} \quad 1200=2^{4} \cdot 3 \cdot 5^{2}$

## GCF

Factors of 12 - 1, 2, 3, 4, 6. 12
Factors of 18 -1, 2, 3, 6, 9, 18 GCF is 6

## LCM

Multiples of $12-12,24,36,48,60,72$ Multiples of $18-18,36,54,72,90,108$ LCM is 36

## evaluate

Evaluate $3 x$ for $x=2,5,10,12$

| $x$ | $3 x$ |
| :---: | :---: |
| 2 | 6 |
| 5 | 15 |
| 10 | 30 |
| 12 | 36 |


kg metric system of $L$ liter measurement milliliter cm mL km centimeter kilogram
${ }^{\text {yd }}$ customary system ${ }^{\text {q }}$
mile of measurement ${ }^{\text {pound }}$ ft inch quart foot in yard m

$$
F-32=1.8 C
$$

$$
\text { proportional } y=2.5 x
$$

(
height and shadow length

## right rectangular prism <br> 



## pyramid


triangular pyramid

## cone






## Line Symmetry 

 linesymmetry


# rotational symmetry 

Z H
2-fold


5-fold


6-fold

# similar plane figures 




## >, <

equality

$$
=\quad \text { divisibility }
$$

proportions
varying quantities
proportions
$y=k x$
$\frac{1}{2} b$

210 miles to 7 gallons
30 miles per gallon ratio

Ratio of dogs to bones is $2: 3$.
There are 6 bones. How many dogs?

## direct proportion

Salary $=\$ 15.00 \times$ Number of hours worked

$$
\begin{array}{l|l|c|c|c|c|c|}
\hline S=15 x & \begin{array}{c}
\text { Hours } \\
\text { Worked } \\
\text { Salary }
\end{array} & \$ 15.00 & \$ 22.50 & \$ 30.00 & \$ 75.00 & \$ 150.00 \\
\hline
\end{array}
$$

$$
\begin{array}{lll}
5 & n & \frac{a}{b}=\frac{c}{d}
\end{array} \quad \frac{4}{7}=\frac{12}{21}
$$

# proportional reasoning 

1 U.S. dollar $=0.92$ Euro
Which is more, $\$ 1$ or 1 Euro? ? luks = 3 tuks Why?


## pictograph

| Students Riding Bicycles to School |  |
| :--- | :--- |
| Beth's class | Miguel's class |
| Ali's class | Kamilla's class |

Each represents one student.

## histogram

Number of Children Yisited a Zoo



## bar

Favorite Sports

## graph




$$
\begin{aligned}
& \text { circle } \\
& \text { graph }
\end{aligned}
$$



frequency

| Favorite Food | Tally | Frequency |
| :--- | :---: | :---: |
| Taco | $\\|\mid\\|$ | 7 |
| Burger | $\\|\backslash\\| \\|$ | 9 |


| Score | Frequency |
| :--- | :---: |
| Below 75 | 4 |
| $76-80$ | 14 |
| $81-85$ | 2 |
| $86-90$ | 8 |
| $91-95$ | 5 |
| $96-100$ | 1 |

## experimental

 probabilitytheoretical probability
Pick a marble
Toss a coin $P($ head $)=\frac{1}{2}$
$P($ tail $)=\frac{1}{2}$

Roll a die -
$P(>4)=1 / 3$
$P($ even $)=\frac{1}{2}$
$P($ white $)=0$

## sampling

Selecting students from P.E. classes

## Selecting names from a hat

Toss a coin event Roll a die Pick a marble

Spin a spinner
Pick a letter

## random sample

students 2, 8, 12, 15 , and 22 from each math class
first 25 names of sixth graders drawn out of a hat
population
all P.E. students all Georgia students
all middle school students

## Circle

the set of points in a plane that are a fixed distance from a given point

## radius

the distance from the center of a circle to a point on a circle, the line segment from the
center of a circle to a point on a circle.

