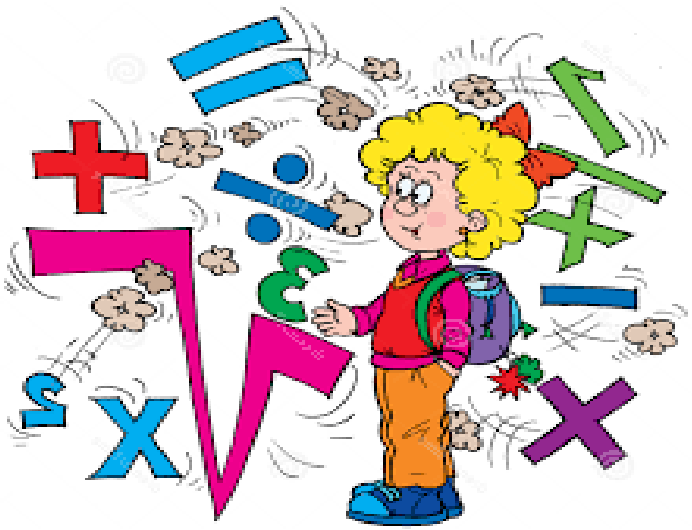
Year 6
Transfer Revision Book



Name: _____

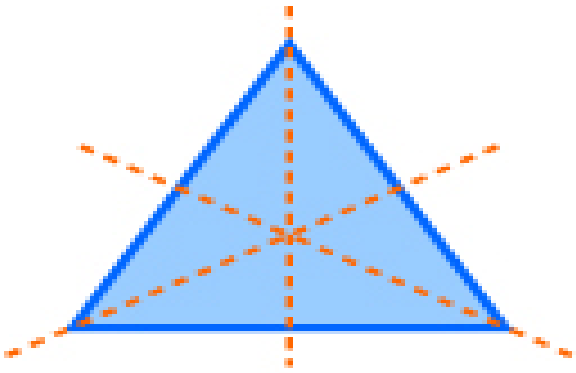
Class: _____

Fraction, Decimal and Percent Sheet

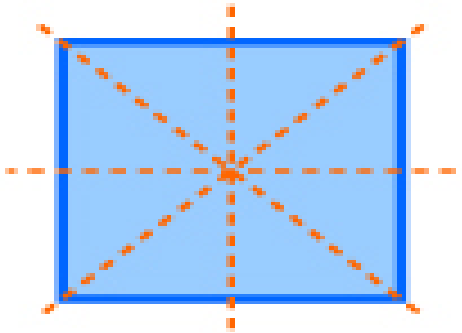
Fraction	Decimal	Percent
1/100	0.01	1%
1/20	0.05	5%
1/10	0.1	10%
1/8	0.125	12.5%
3/20	0.15	15%
1/6	0.16	16⅔
1/5	0.2	20%

Fraction	Decimal	Percent
1/4	0.25	25%
3/10	0.3	30%
1/3	0.33	33.3%
7/20	0.35	35%
3/8	0.375	37.5%
2/5	0.4	40%

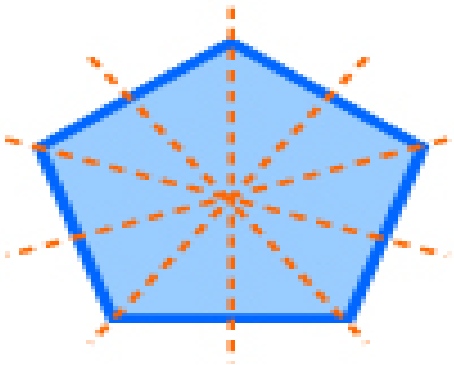
Fraction	Decimal	Percent
1/2	0.5	50%
3/5	0.6	60%
5/8	0.625	62.5%
2/3	0.66	66.6%
7/10	0.7	70%
3/4	0.75	75%



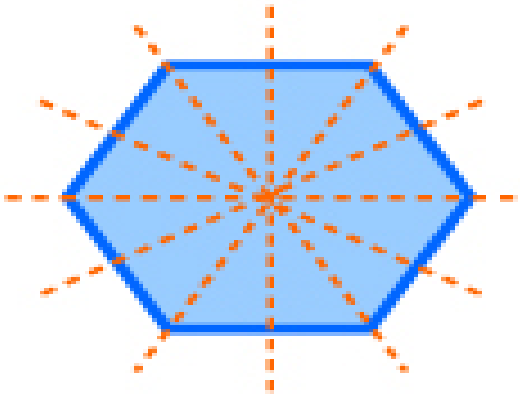
an equilateral triangle
has 3 lines of symmetry



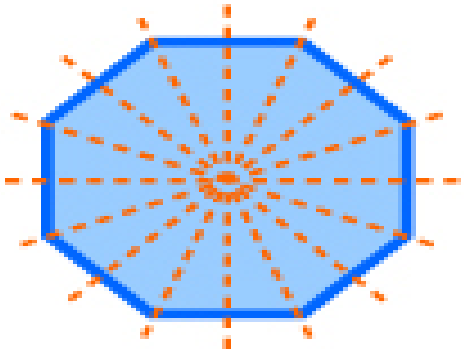
a square
has 4 lines of symmetry



a regular pentagon
has 5 lines of symmetry

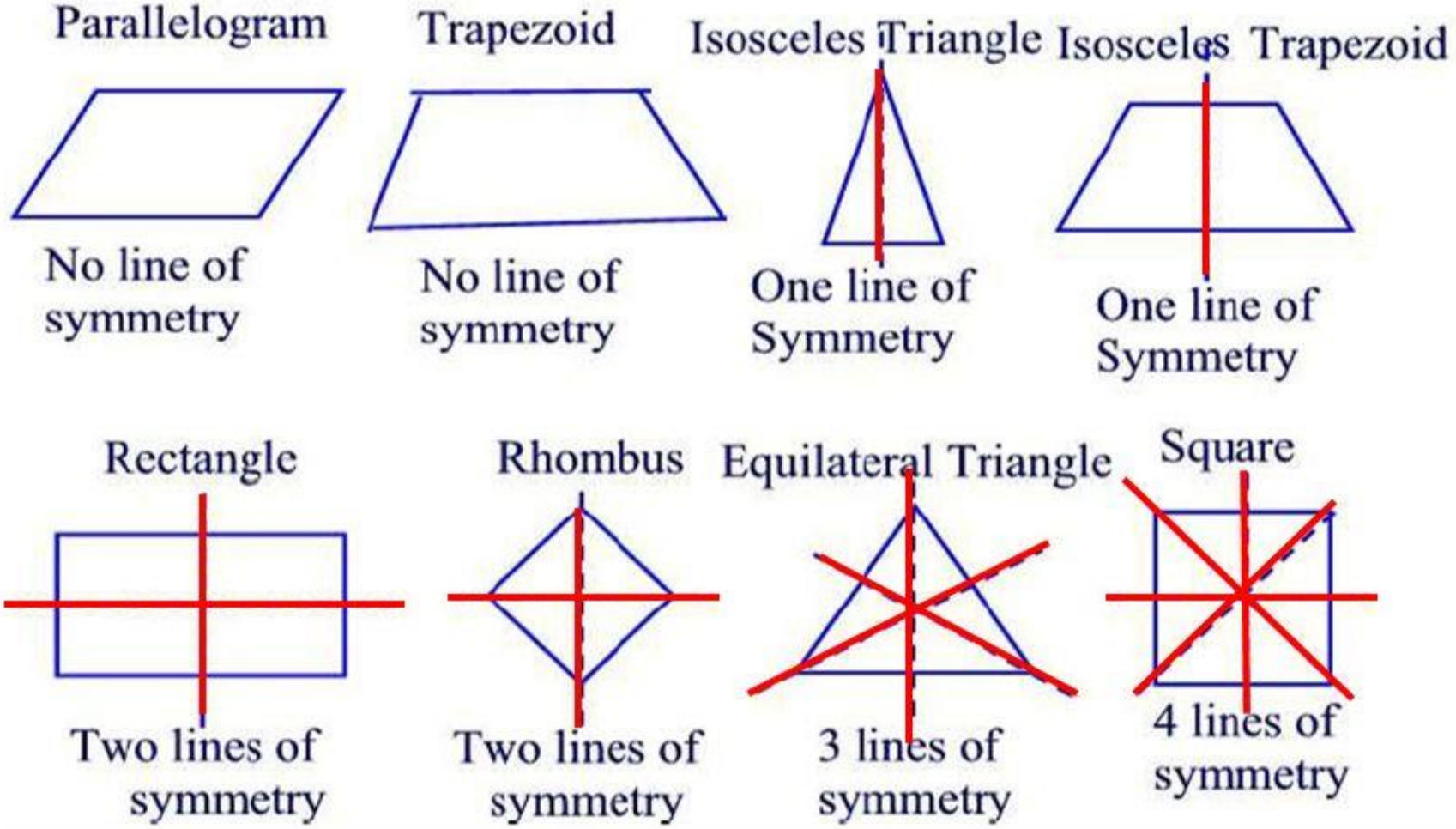


a regular hexagon
has 6 lines of symmetry



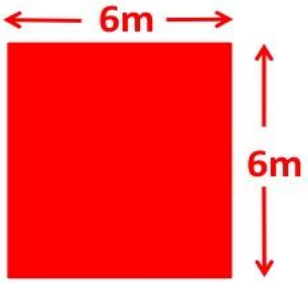
a regular octagon
has 8 lines of symmetry

Mirror Symmetry



AREA

Surface Area of a Square

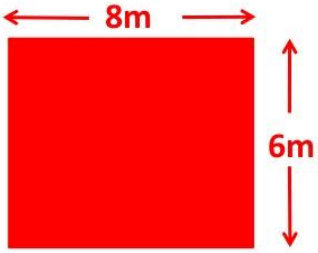


Area = Length x Height

Area = 6 x 6

Area = 36m²

Surface Area of a Rectangle

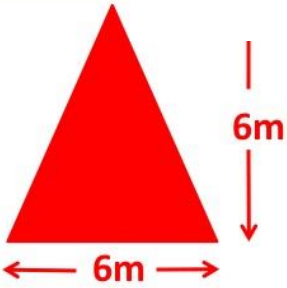


Area = Length x Height

Area = 8 x 6

Area = 48m²

Surface Area of a Triangle



Area = ½ x Length x Height

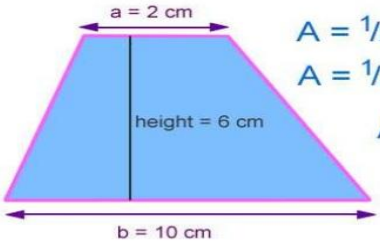
Area = 0.5 x 6 x 6

Area = 18m²

Area of Trapezium

The area of a Trapezium equals half the sum of the parallel sides, times the height between them.

$$A = \frac{1}{2}(a + b) \times h$$



$A = \frac{1}{2}(a + b) \times h$

$A = \frac{1}{2}(2 + 10) \times 6$

$A = 36\ cm^2$

Image Source: Passy's World of Mathematics

0	+1	+2
(0 lines of symmetry)	(1 line of symmetry)	(2 lines of symmetry)
F G J	A B C	H I O
K L N	D E M	X
P Q R	T U V	
S Z	W Y	

A point is an exact location in space or a flat surface

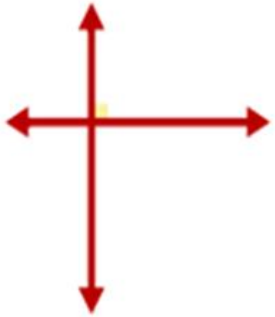
A line is a collection of points that continues forever in both directions

A line segment is a part of a line with two endpoints

A ray starts from one point and extends in one direction forever

An angle is formed when two rays share an endpoint

Intersecting lines are lines that pass through the same point



Perpendicular lines are lines that intersect at right angles

Parallel lines are lines that never intersect

Hey diddle diddle the **Median's**

the **middle**

You **add** then divide for the **Mean**

The **Mode** is the one you see the **most**

And the **Range** is the **difference** between

MEAN

Commonly used in sport to find out a score in sports like Football, Basketball and Cricket

Is also known as the "average"

1. Add up all the values to get the total
2. Then divide the total by the number of values you added together

3 + 4 + 8 + 7 + 5 + 3 = 30

30 ÷ 6 = 5

The average for these values is 5

MEDIAN

Used when comparing house prices.

The "middle" number in a set of values

1. First put all the values in order
2. Find the middle number in the set of data
3. If there are two values in the middle, find the mean of these two.

1, 2, 4, 5, 6, 8, 9

The median is 5.

Mode

Eg. What is the mode of goals kicked by a footballer after each round?

The number which occurs the most

1. Count how many of each value appears
2. The mode is the value which appears the most
3. There can be more than 1 mode

1, 2, 2, 5, 6, 6, 9

2 and 6 are the mode for these values

range

Measures difference between all the values. Used in weather.

The range is the difference between the highest and lowest value

1. Find the highest and lowest values
2. Subtract the lowest value from the highest value.

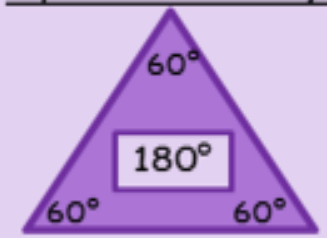
1, 2, 2, 5, 6, 6, 9

9 − 1 = 8 The range is 8

Interior angles in regular polygons

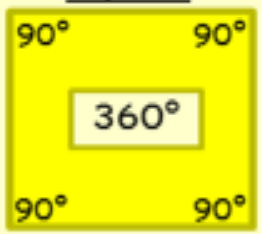
If a shape is regular, all of its angles are the same size.

Equilateral Triangle



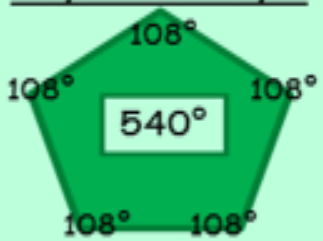
Total = 180°
One angle = 180 ÷ 3
= 60°

Square



Total = 360°
One angle = 360 ÷ 4
= 90°

Regular Pentagon



Total = 540°
One angle = 540 ÷ 5
= 108°

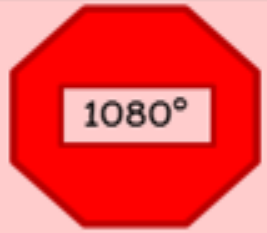
Regular Hexagon

Total = 720°
One angle = 720 ÷ 6
= 120°

Regular Heptagon

Total = 900°
One angle = 900 ÷ 7
= 128.5...°

Regular Octagon



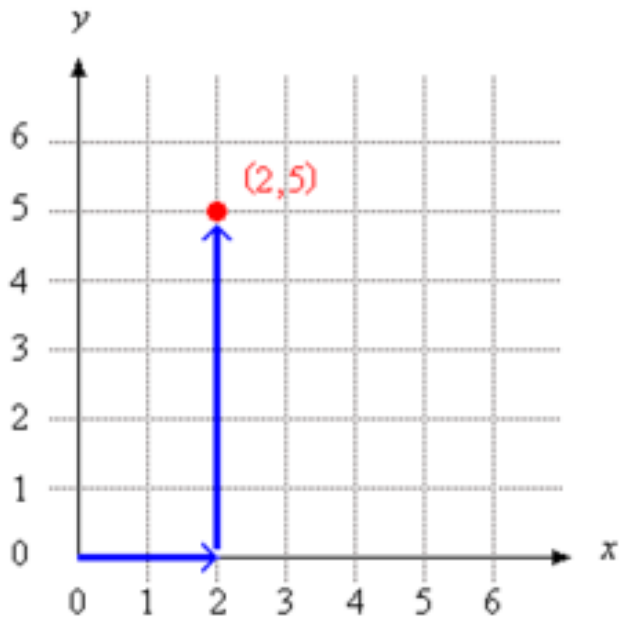
Total = 1080°
One angle = 1080 ÷ 8
= 135°

If the polygon has **n sides**, the angle sum is $(n - 2) \times 180$.

Divide this answer by **n** to get the size of one angle.

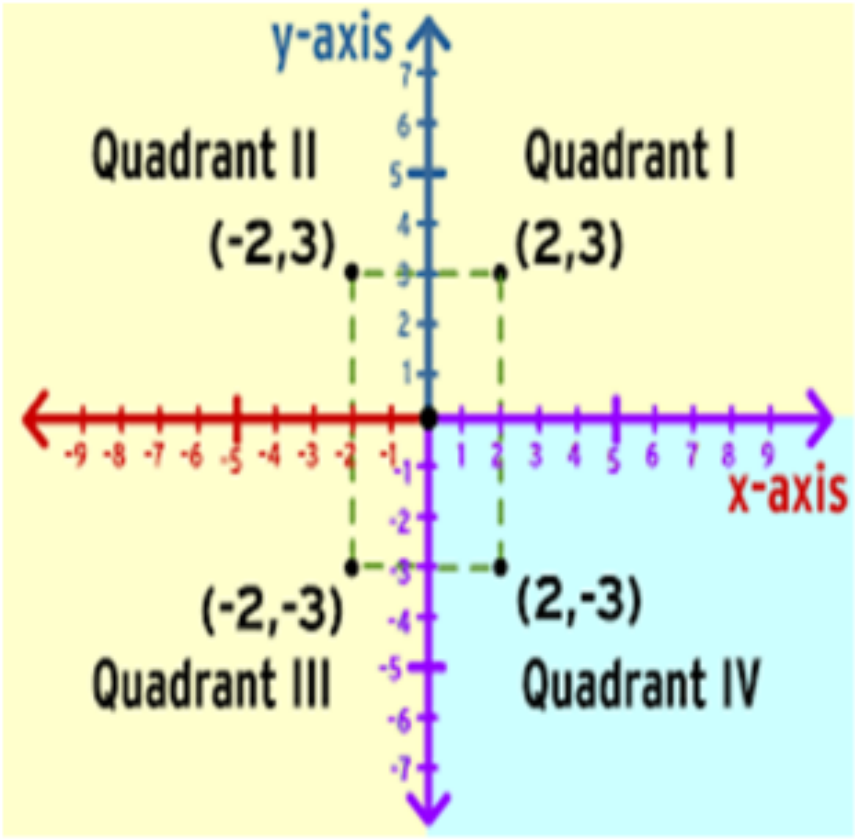
$$\frac{180(n-2)}{n}$$

Plotting Co - Ordinates



Go along the corridor
and up the stairs

The Co – Ordinate Grid



Multiples

A multiple is a number which can be divided by another number without a remainder.

For example: 32 ÷ 4 = 8 32 ÷ 8 = 4

Factors

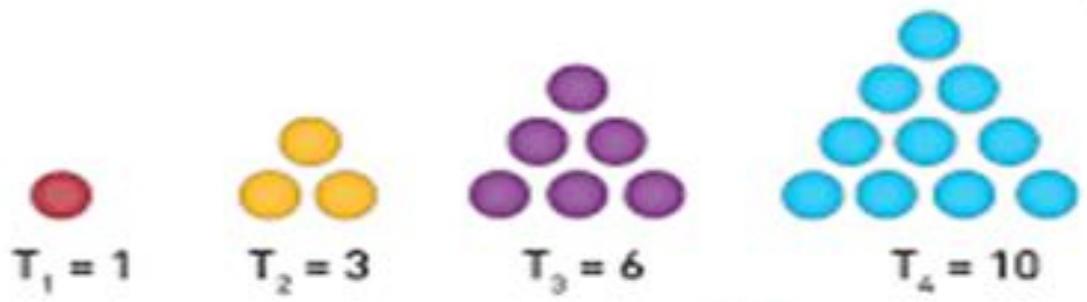
A factor is a number that will divide into another number without a remainder.

For example: 32 ÷ 4 = 8 32 ÷ 8 = 4

What is a prime number?

A prime number is a whole number which can only be divided by itself and 1. A prime number must have exactly two factors.

TRIANGULAR NUMBERS



Square Numbers

Numbers which can be arranged in a square shape - for example:

$1 \times 1 = 1 = 1^2$
$2 \times 2 = 4 = 2^2$
$3 \times 3 = 9 = 3^2$
$4 \times 4 = 16 = 4^2$

Cubed Numbers

$1^3 = 1 \times 1 \times 1 = 1$

$2^3 = 2 \times 2 \times 2 = 8$ 

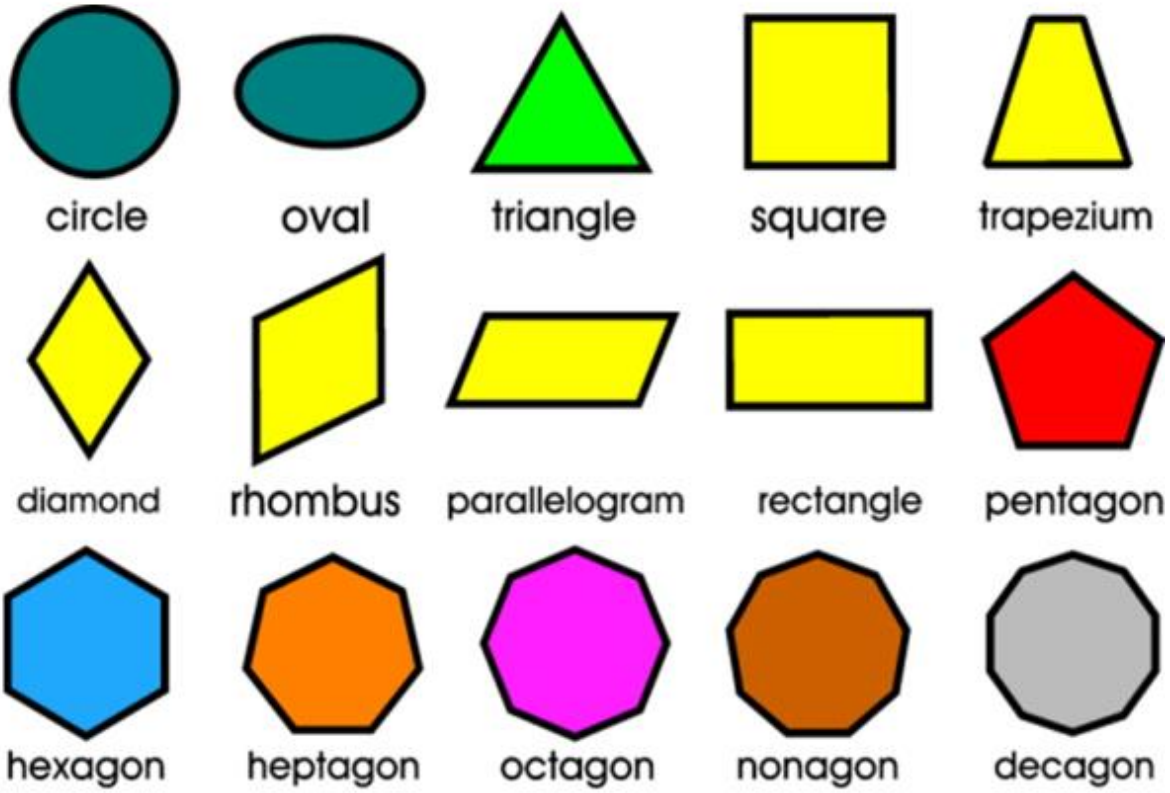
$3^3 = 3 \times 3 \times 3 = 27$

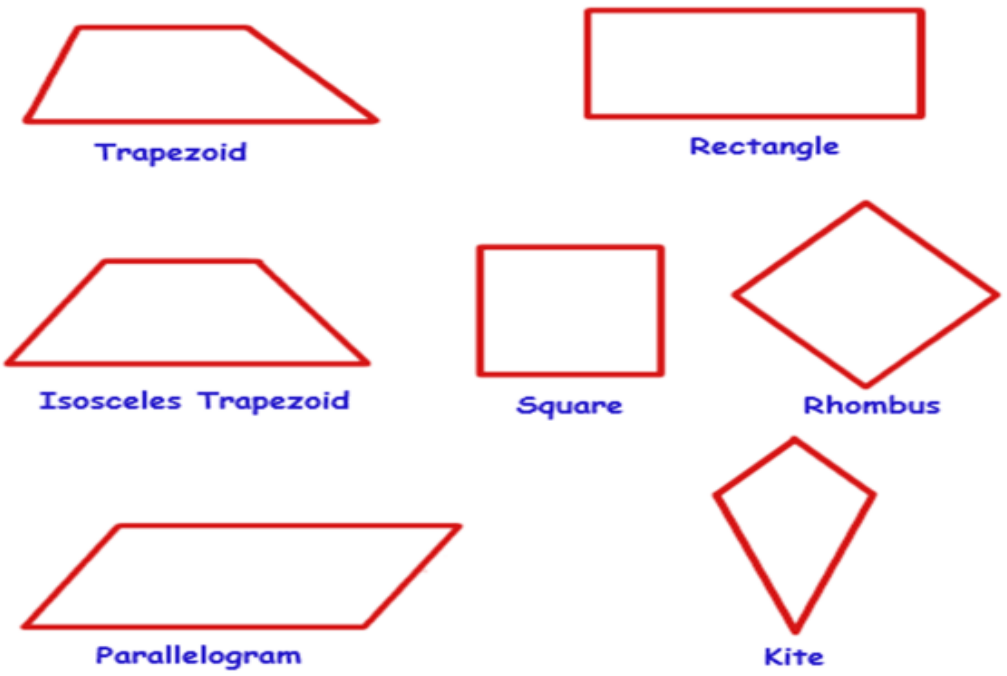
$4^3 = 4 \times 4 \times 4 = 64$ 

Consecutive Numbers

numbers in their counting order

4, 5, 6, 7, 8, 9 YES!

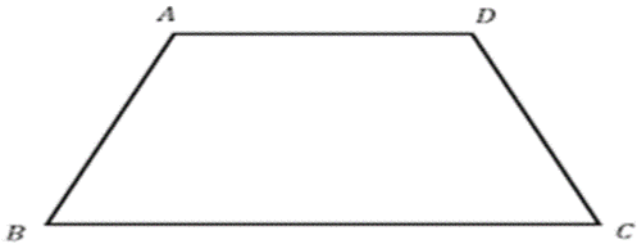

circle
oval
triangle
square
trapezium
diamond
rhombus
parallelogram
rectangle
pentagon
hexagon
heptagon
octagon
nonagon
decagon


Trapezoid
Rectangle
Isosceles Trapezoid
Square
Rhombus
Parallelogram
Kite

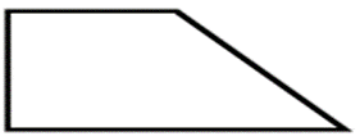
TRIANGLE FAMILY

Equilateral Triangle	Isosceles Triangle	Scalene Triangle

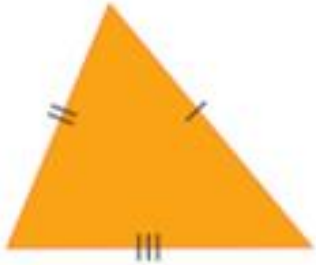
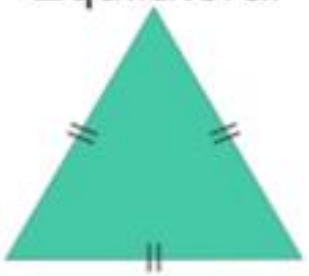
Right Triangle	Acute Triangle	Obtuse Triangle



Isosceles Trapezium



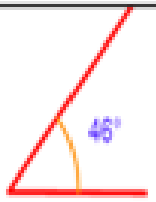
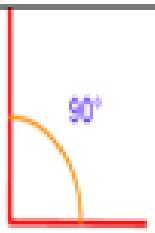
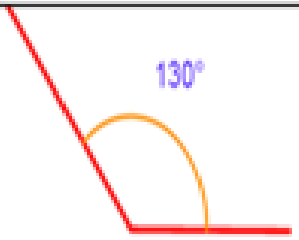
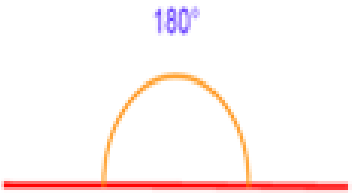
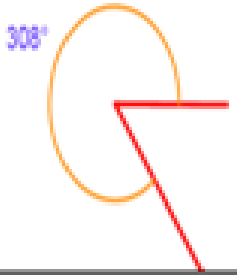
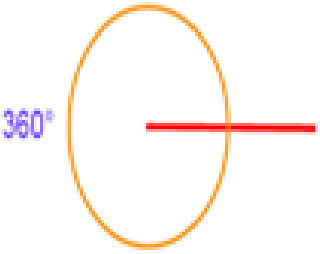
Triangles Based on Sides

Scalene	Isosceles	Equilateral
		
Length of all sides are different	Length of two sides are equal	Length of all sides are equal

Triangles Based on Angles

Acute	Right	Obtuse
		
Each angle is < 90°	One angle is = 90°	One angle is > 90°

TYPES OF ANGLES

Type of Angle	Description	Example
Acute Angle	An angle that is less than 90°	
Right Angle	An angle that is exactly 90°	
Obtuse Angle	An angle that is greater than 90° and less than 180°	
Straight Angle	An angle that is exactly 180°	
Reflex Angle	An angle that is greater than 180° and less than 360°	
Full Angle	An angle that is exactly 360°	

① $2\overline{)165}$ = 82 r 1 = $82\frac{1}{2}$ = 82.5

② $3\overline{)2219}$ = 076 r 1 = $76\frac{1}{3}$ = $76.\dot{3}3$

③ $3\overline{)2679}$ = 089 r 2 = $89\frac{2}{3}$ = $89.\dot{6}6$

④ $4\overline{)1825}$ = 246 r 1 = $246\frac{1}{4}$ = 246.25

⑤ $4\overline{)1827}$ = 246 r 3 = $246\frac{3}{4}$ = 246.75

⑥ $4\overline{)1826}$ = 246 r 2 = $246\frac{2}{4}$ = 246.5

Dividing and converting remainders to a decimal

To order fractions from

- smallest to largest
- largest to smaller

You must make all the fractions equivalent first ⇒

Eg: Put these fractions in order from the largest to the smallest

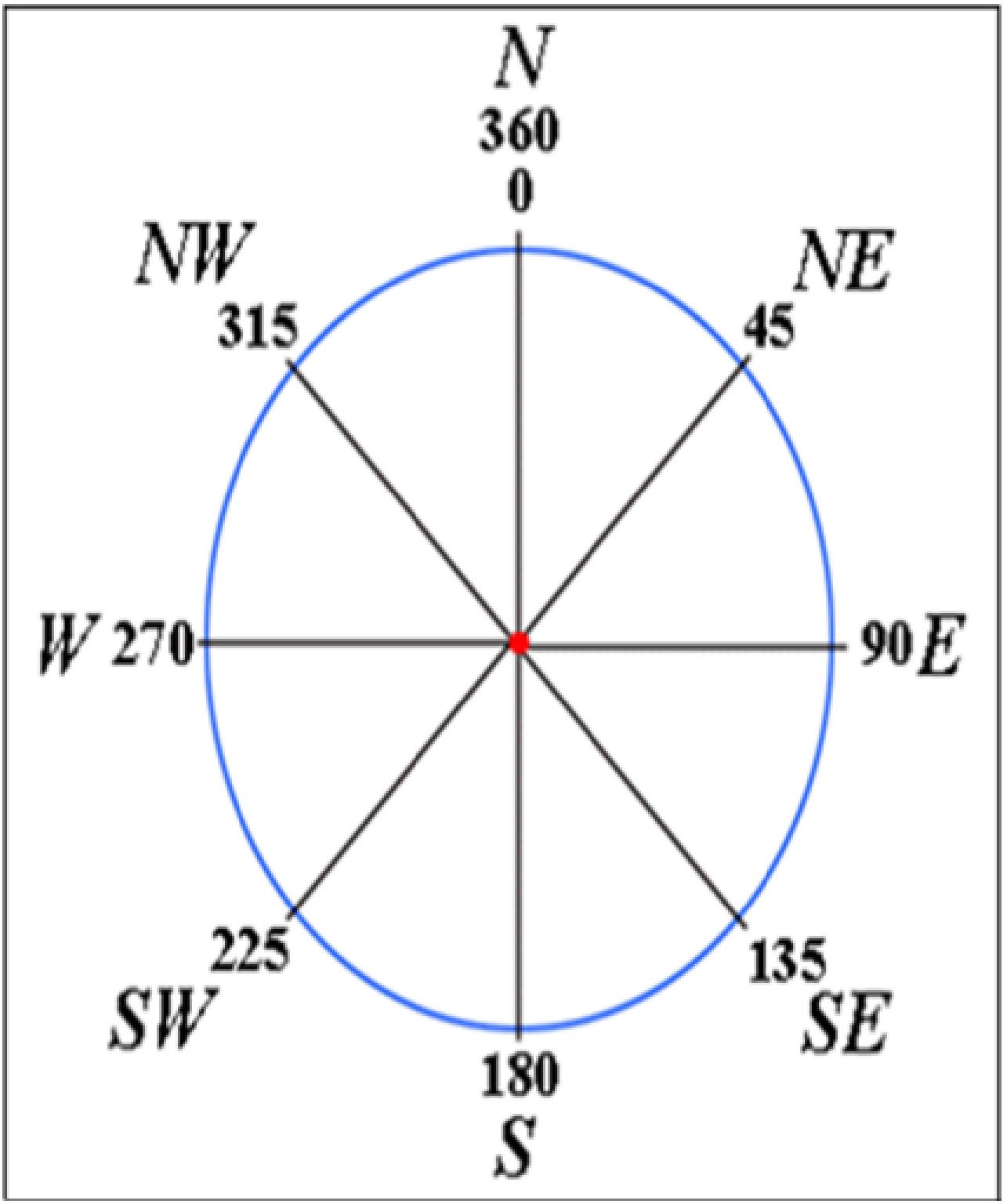
$\frac{5}{8}$ $\frac{31}{48}$ $\frac{4}{6}$ $\frac{17}{24}$ $\frac{3}{4}$ ✓

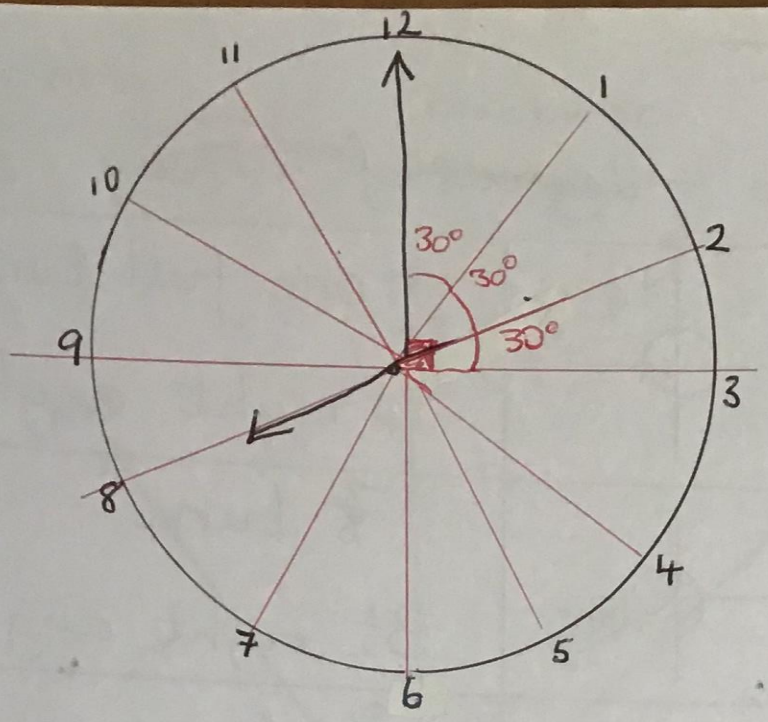
$\frac{30}{48}$ $\frac{31}{48}$ $\frac{32}{48}$ $\frac{34}{48}$ $\frac{36}{48}$

$\frac{3}{4}$ $\frac{17}{24}$ $\frac{4}{6}$ $\frac{31}{48}$ $\frac{5}{8}$

ANTICLOCKWISE

CLOCKWISE





Calculate:

① The larger angle between the hands = 240°

② The smaller angle between the hands = 120°

③ The degrees turned by the hour hand from 10:15 to 12:15. = 60°

④ The degrees turned by the minute hand 10:15 to 12:15 = 720°

⑤ The angle made if the clock changes from 8:10 to 8:35 = 150°

⑥ The angle made if the clock changes from 7:55 to 8:30. = 210°

Multiplying

Multiplying a number by 10, put one 0 onto the end of the number.

E.g. 21 x 10 = 210

Multiplying a number by 100, put two 0s onto the end of the number.

E.g. 16 x 100 = 1600

Multiplying a number by 1000, put three 0s onto the end of the number.

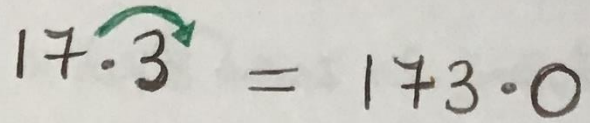
E.g. 17 x 1000 = 17000

Multiplying Decimals

When multiplying a decimal by -

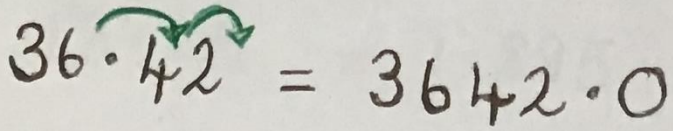
- 10 Move the decimal point one place to the right

E.g.



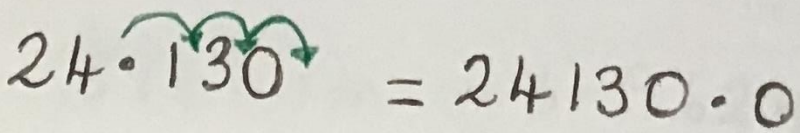
- 100 Move the decimal point two places to the right

E.g.



- 1000 Move the decimal point three places to the right

E.g.



Dividing

Dividing a number by 10, take away one 0 from the end of the number.

E.g. 600 ÷ 10 = 60

Dividing a number by 100, take away two 0s from the end of the number.

E.g. 12,000 ÷ 100 = 120

Dividing a number by 1000, take away three 0s from the end of the number.

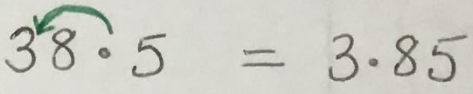
E.g. 48,0000 ÷ 1000 = 480

Dividing Decimals

When dividing a decimal by –

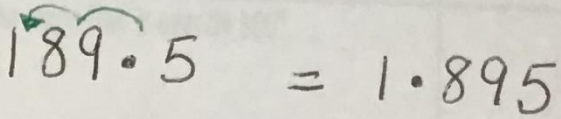
- 10 Move the decimal point one place to the left

E.g.



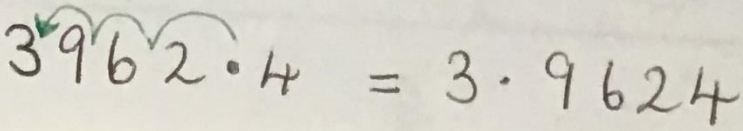
- 100 Move the decimal point two places to the left

E.g.

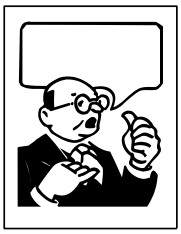


- 1000 Move the decimal point three places to the left

E.g.



Rules of Direct Speech



1. Speech marks (" ") are use to show what is spoken aloud by a character.

E.g. "Hello. How are you?" said Billy.

2. You start the speech marks before the first word spoken.

E.g. He walked at and said, "Good to see you."

3. You close the speech marks after the last word they speak not at the end of each sentence.

E.g. "Would you like something to drink?" Dan asked.

There is always punctuation before you close the speech marks.

4. When someone new speaks you must start a new line.

E.g. "Thank you. Do you have any cola?" Billy requested.
"Of course," Dan answered.

5. The first word of a new piece of speech must have a capital letter.

E.g. Billy smiled and said, "Perfect!"

6. The same rules of punctuation must be used in speech such as commas and question marks.

E.g. "Do you want ice?" he continued.

7. There is <u>always</u> a piece of punctuation <u>before</u> you open and close speech marks.

E.g. "I am cold," Joe said, "but I will be fine."
"I am cold," Joe said. "I will be fine."

8. There is <u>always</u> a piece of punctuation <u>after</u> 'said' or 'said Tom'

E.g. "It is cold," Tom said to Kate.
"It is cold," Tom said, "but I will be fine."
"It is cold," Tom said. "Where are my gloves?"

How to write direct speech...

beginning and end

Do you have speech marks at the start and at the end of the words being spoken?

"Action!" said the director.

new speaker, new line

Have you started a new line every time someone new starts speaking?

"Can we have a close up?" asked Sarah.
"No problem!" replied Thomas.

capital letter

Do you have a capital letter at the start of the speech?

Bruce said, "Sorry, I forgot my lines."

commas

Have you remembered to add commas?

Paul whispered, "Great job."

"Thank you," replied Justine.

punctuation

Do you have punctuation inside the speech marks?

"That's a wrap!" cheered the producer.

different names

Inverted commas

Quotation marks

Speech marks

There are 3 names for this piece of punctuation.

Synonym	Antonym
A word having same or identical meaning to another word is called a synonym.	A word having opposite meaning to another word is called an antonym.
Example: The girl looks very **beautiful**. The synonym of **beautiful** is **pretty.**	**Example:** The girl looks very **beautiful**. The antonym of **beautiful** is **ugly**.

Parts of Speech

NOUN

Name of a person, place, thing or idea.

Examples: Daniel, London, table, hope
- ***Mary*** uses a blue ***pen*** for her ***notes***.

PRONOUN

A pronoun is used in place of a noun or noun phrase to avoid repetition.

Examples: I, you, it, we, us, them, those
- ***I*** want ***her*** to dance with ***me***.

ADJECTIVE

Describes, modifies or gives more information about a noun or pronoun.

Examples: cold, happy, young, two, fun
- The ***little*** girl has a ***pink*** hat.

VERB

Shows an action or a state of being.

Examples: go, speak, eat, live, are, is
- I ***listen*** to the word and then ***repeat*** it.

ADVERB

Modifies a verb, an adjective or another adverb. It tells how (often), where, when.

Examples: slowly, very, always, well, too
- ***Yesterday,*** I ate my lunch ***quickly***.

PREPOSITION

Shows the relationship of a noun or pronoun to another word.

Examples: at, on, in, from, with, about
- I left my keys ***on*** the table ***for*** you.

CONJUNCTION

Joins two words, ideas, phrases together and shows how they are connected.

Examples: and, or, but, because, yet, so
- I was hot ***and*** tired ***but*** still finished it.

INTERJECTION

A word or phrase that expresses a strong emotion. It is a short exclamation.

Examples: Ouch! Hey! Oh! Watch out!
- ***Wow!*** I passed my English exam.

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Homonym — words that sound the same, but have a different meaning

- for → fore → four
- there → their → they're
- were → where → wear
- to → two → too
- won → one

Adverbs

How?

angrily
anxiously
cautiously
cheerfully
courageously
crossly
cruelly
defiantly
doubtfully
elegantly
enthusiastically
foolishly
frantically
gently
gladly
gracefully
happily
hungrily
inquisitively
irritably
joyously
loudly
madly
merrily
nervously
quickly
sadly
safely
shyly
solemnly
weakly
well
wildly

When?

afterwards
again
before
beforehand
early
lately
never
now
often
punctually
recently
soon
then
today
tomorrow
yesterday

How often?

always
annually
constantly
daily
hourly
monthly
never
occasionally
often
once
regularly
repeatedly
sometimes
usually
yearly

Where?

above
around
away
below
down
downstairs
everywhere
here
inside
outside
there
up
upstairs
wherever

How much?

almost
completely
entirely
little
much
rather
totally
very

More useful adverbs...

additionally
appropriately
consequently
fittingly
hence
however
insufficiently
suitably
therefore

Common Suffixes

Noun

tion ness sion

-ice –ence -ance -ment

-ity –ism -ant -ant

Verb

Can you do it? Then it's a verb- if you can put 'to' in front of it or add -ing to it, it's a verb. ed

[Some words can be nouns, verbs and adjectives, e.g. jump, spring!

Adjectives

-ous –ive –ic

-ine –ical

-able –ible –y

-ar –ious

-en

Adverb

(normally ends in –ly)

e.g happily, softly

if adjectives ends in y, change the y to i and add ly.

Exceptions

Very, soon, fast, high.

[A word can only be used as one part of speech within the context of a sentence].