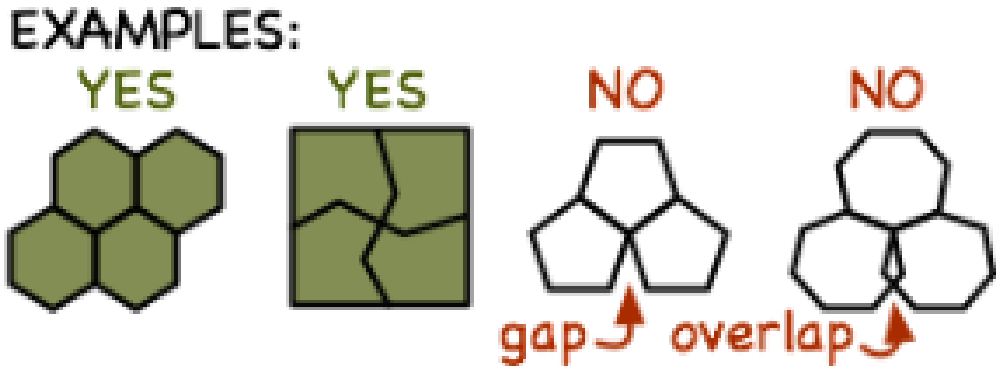
Rosary School \ Marj Elhamam

Name : _____ Date : 20 / 10 / 2025

Subject: study sheet (3) / chapter (3) Grade : 5 ( )

3.A Identify, Describe, Classify and Sketch Quadrilaterals

- A polygon is a flat, two-dimensional shape with straight sides that are fully closed.
- A quadrilateral is a two-dimensional shape with four sides and four angles.
- **Tessellation** means when we cover a surface with a pattern of flat shapes with no overlaps or gaps.



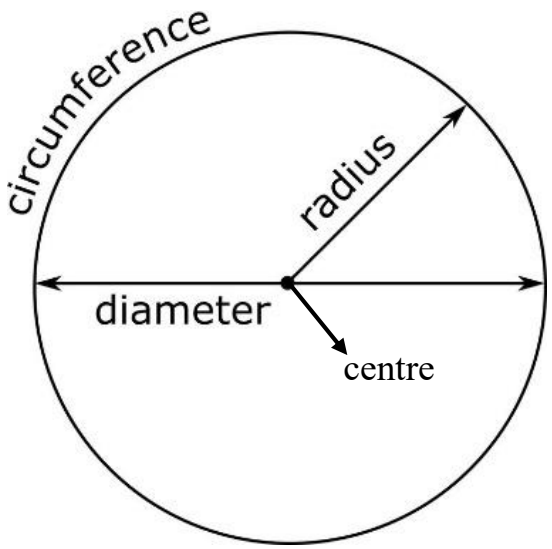
3.B Identify parts of a circle.

- **Circle:** all points in a plane that are the same distance from the centre.
- **Centre:** the fixed middle point of the circle which has same distance with any point on the circle boundary.
- **Circumference:** the boundary of a circle.

- **Diameter (d):** a line through the centre connecting two points on the circle boundary.
- **Radius (r):** a line segment from the centre to any point on the circle.

The plural of radius is radii

All radii are equal.



- Note that:
  - $d = 2 \times r$
  - $r = d \div 2$

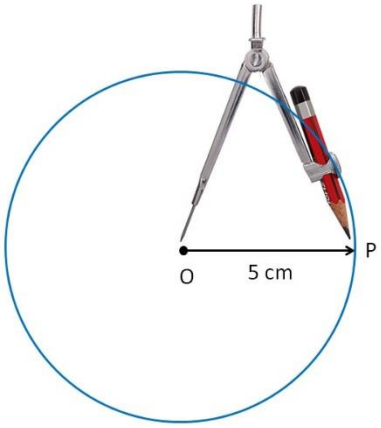
3.C Construct a Circle.

You Need:

Pencil Ruler Compass

Steps to construct a circle:

1. **Make a point** on your paper.
   → This is the **centre** of your circle (O).
2. **Open the compass** to the size you want.
   → This length is called the **radius** for example 5 cm
3. **Put the sharp point** of the compass (compass needle) on the center.
4. **Turn the compass** all the way around **without lifting it**.
5. When you reach the start point again (p), your **circle is complete!**

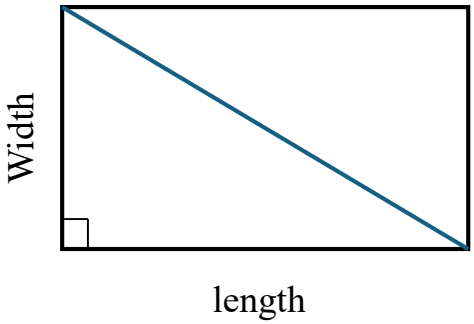


❖ 3.D Area of triangles:

The area of a right-angled triangle can be found by calculating the area of a rectangle then dividing the answer by two.

Area of rectangle = length x width.

Area of triangle = length × width ÷ 2



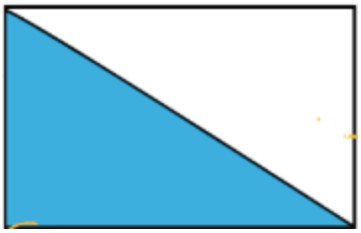
Worked examples:

1) The area of the rectangle is 160 cm². Find the area of the shaded triangle.

Area of shaded triangle = Area of rectangle ÷ 2

= 160 ÷ 2

= 80 cm²

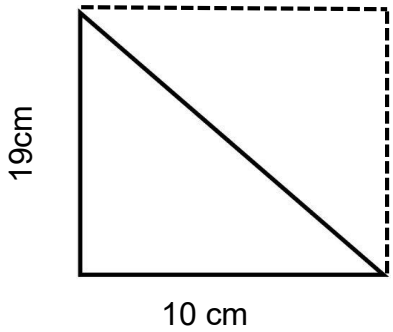


2) Find the area of this triangle.

Area of triangle = length × width ÷ 2

= 10 × 19 ÷ 2

= 95 cm²

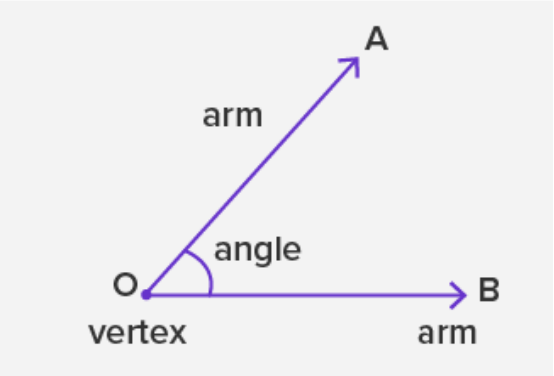


3.E classify, estimate, measure and draw angles.

An angle is formed by two rays (arm) that share a common endpoint, or vertex

Parts of Angles

- **Vertex:** A vertex is a corner of an angle, a point where two lines/sides meet. O is the vertex in the given figure.
- **Arms:** The two sides of the angle, joined at a common endpoint. OA and OB are arms of an angle.

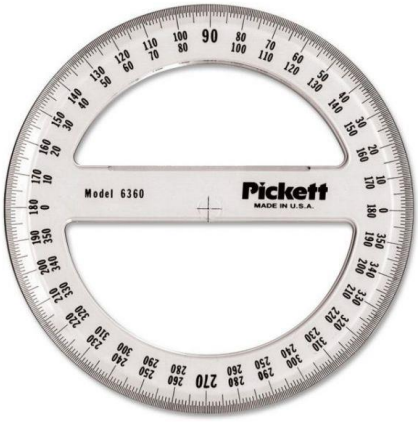


The size of the angle depends on how widely or narrowly the two arms are spread apart. The wider open an angle is, the greater its measure.

Angles are measured in degree from 0° to 360°.

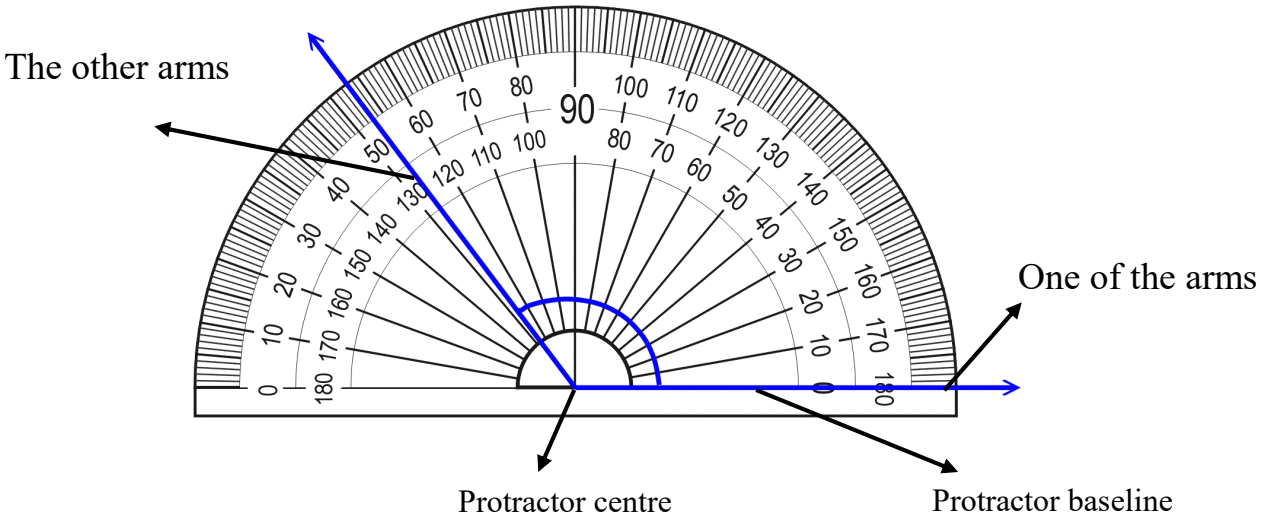
We can measure the size of any angle using a protractor.

Here are two types of protractors.



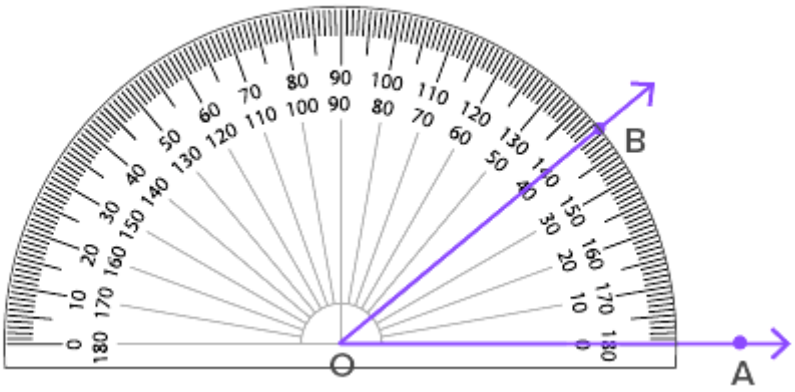
How to measure an Angle.

1. Use a protractor.
2. Align protractor center hole with the angle's vertex.
3. Align protractor straight baseline with one of the arms.
4. Read the measurement in degrees where the other arm crosses the curved scale.



How to Construct an Angle (using protractor)

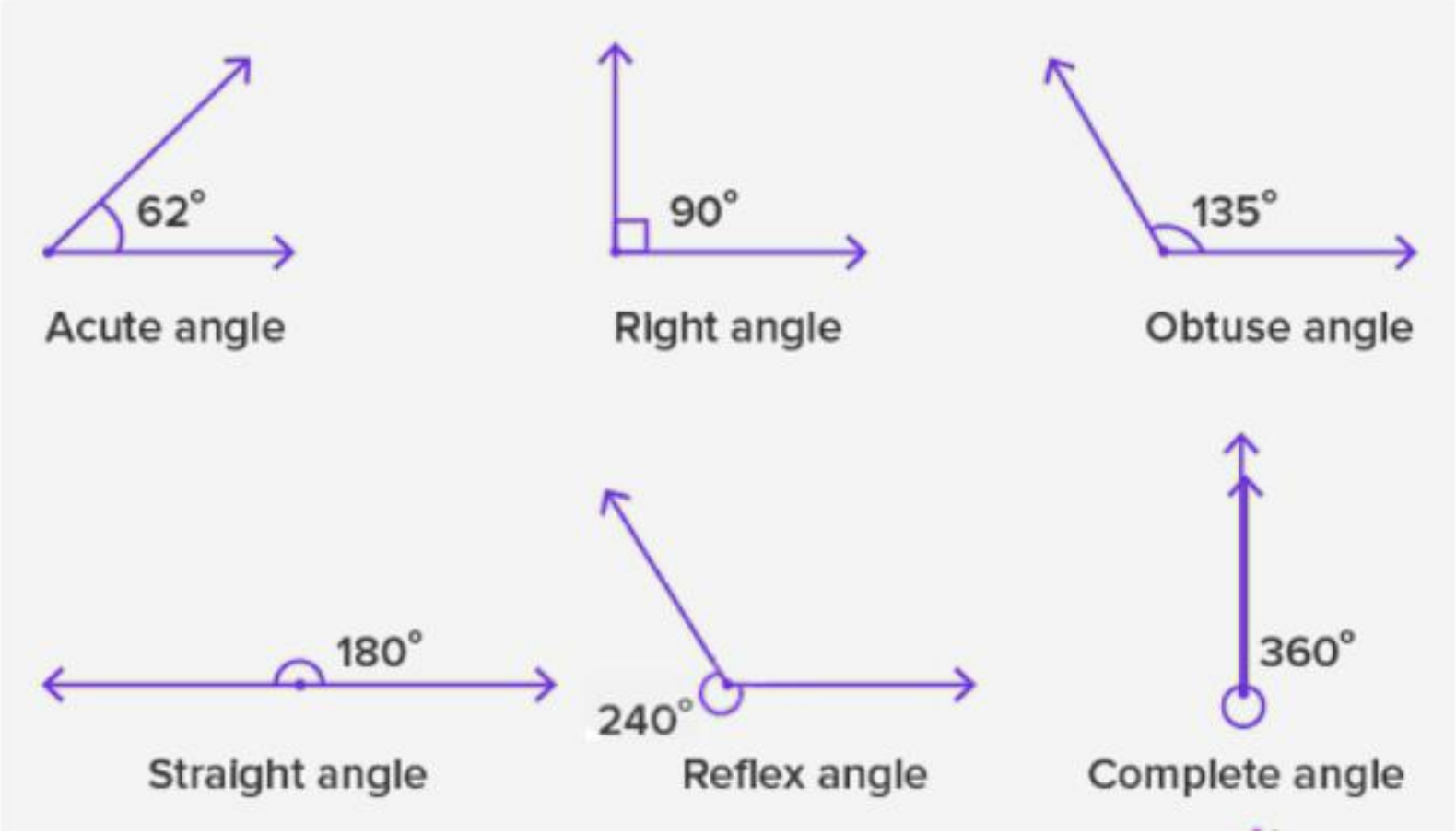
1. Draw a ray OA of any length.
2. Now, place the protractor at that point, and its midpoint should touch the marked point O.
3. Now mark the point as B on the top circular part of a protractor, according to the preferred angle for example 40°.
4. Draw a straight line joining those two points, O and B.
5. Mark the degree of the angle made where two sides of the straight line intersect.



Types of Angles

Based on their measurements, here are the different types of angles:

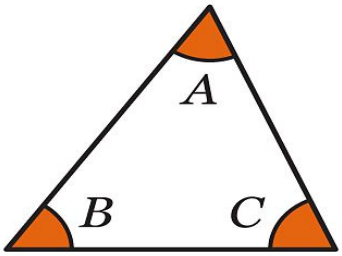
- An **acute angle** measures less than 90° at the vertex.
- An **obtuse angle** is between 90° and 180°.
- A **right angle** precisely measures 90° at the vertex.
- An angle measuring exactly 180° is a **straight angle**.
- A **reflex angle** measures between 180°- 360°.
- A **complete** angle measure equals 360°.A **complete** angle measure equals 360°.



- ❖ To measure a reflex angle, measure the angle inside the arms then subtract it from 360°.
- ❖ To draw a reflex angle, subtract it from 360° and draw the answer then label the angle outside the arms.

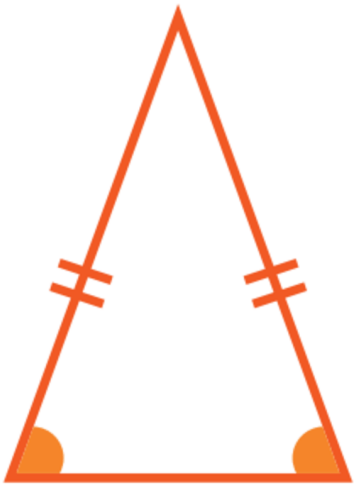
❖ **3.F Find angles in triangles .**

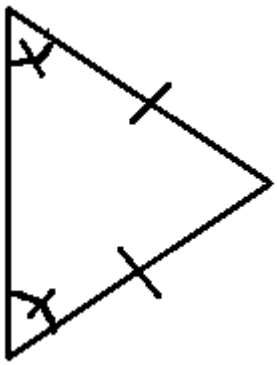
❖ The rule is that the three angles inside any triangle always add up to 180˚.

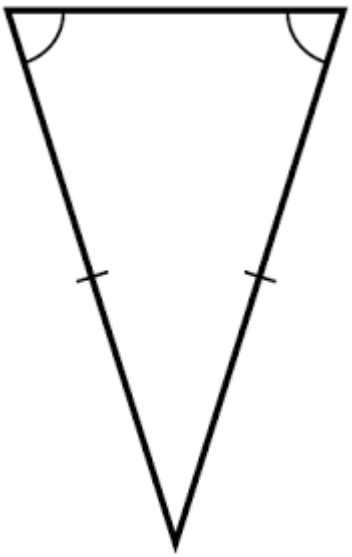


$$A + B + C = 180°$$

❖ The isosceles triangle has two equal sides and two equal angles.







Angles opposite to equal sides are equal.

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Name : …… Date : / 9 / 2025

Subject: Study sheet (1) / Chapter 1 Grade : 5 ( )

Place Value

1.A Understand Decimals up to Thousandths

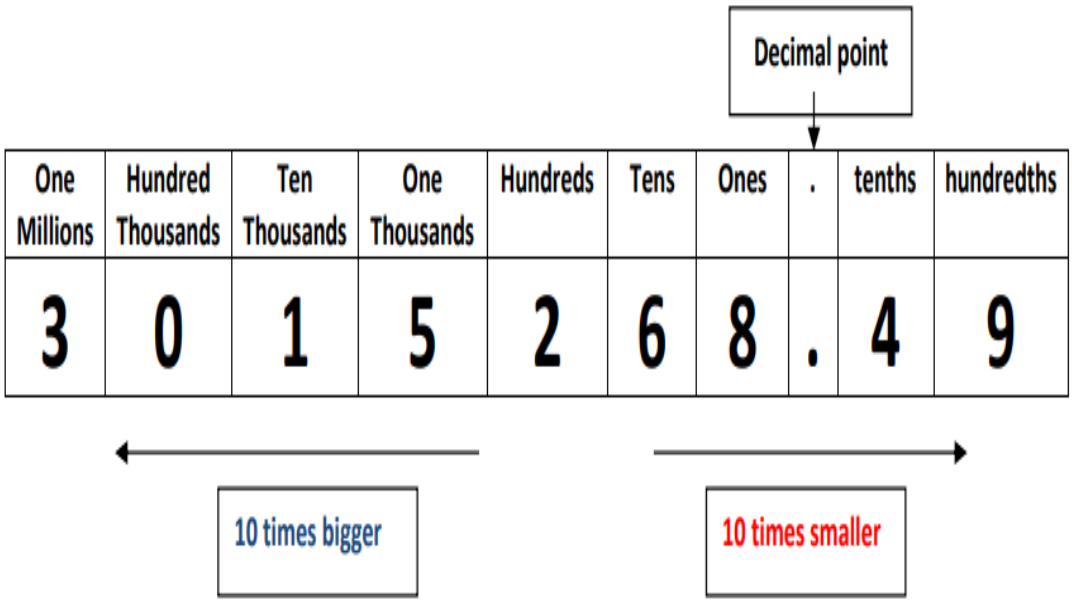
- **Decimal number:** is a number that consists of a whole and a fractional part, and written in decimal notation, for example 34.5
- **Place value** refers to the value of the digits in any given number.

Example:

In the number 482 the value of the digit '4' is **400**, the value of the digit '8' is **80** and the value of the digit '2' is simply **2**.

At a more advanced level, in the number 36.57, the value of the digit '5' is **0.5** and the value of the digit '7' is **0.07**.

- Here is a place value chart for a decimal number.



❖ **Real life examples with decimal point**

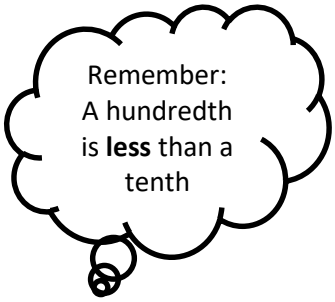
a) A student's height is **1.52** m, and her brother's height **1.67** m.

b) A swimmer finishes a lap in **56.72** seconds.

c) A cake recipe needs **1.25** cups of sugar and **0.75** cups of milk.

❖ Important vocabulary

- **Compose:** put a number together from its parts, for example 600+30+2=632
- **Decompose:** break down a number into parts, for example 456 is 400+50+6
- **Regroup:** to change the way a number is written, for example 456=400+50+6, but you can also change this to 400+40+10+6



1.B Multiply and Divide by 10, 100 or 1000

❖ Here are some real life examples for multiplying and dividing decimal number by 10, 100 and 1000

1) A phone case costs 12.5 JD, what is the cost of 10 cases?

   12.5 × 10 = 125 JD.

2) You deposit 4.75 JD every day, How much after 10 days?

   4.75 × 10 = 47.5 JD

3) If you save 3250 cents, how many dollars is that?

   3250 ÷ 100 = $ 32.5

➢ **If you multiply a whole number by:**

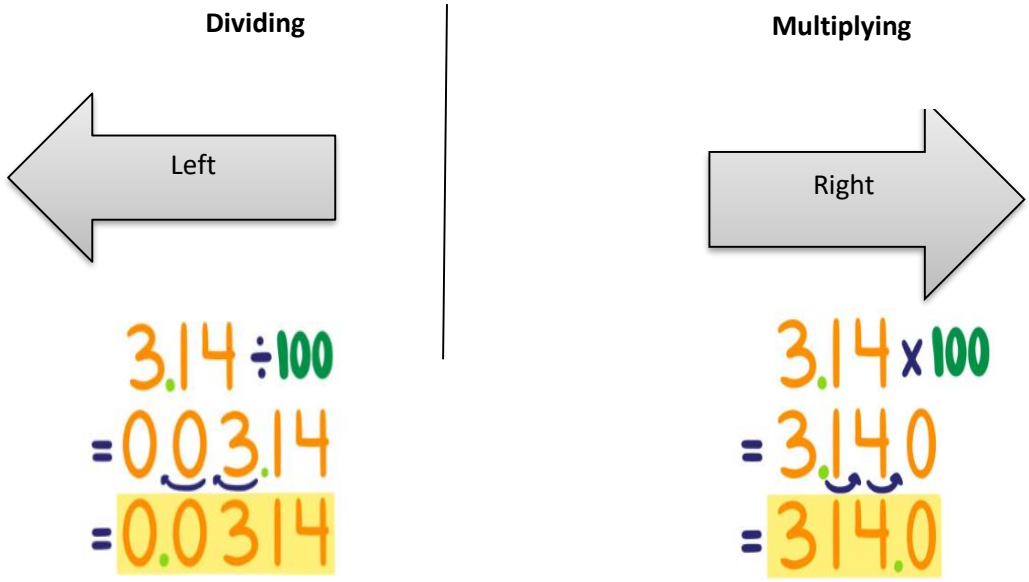
- 10 add one zero, for example 34×10 is 340
- 100 add two zeros, for example 34×100 is 3400
- 1000 add three zeros, for example 34×1000 is 34000

➢ **If you multiply a decimal number by:**

- 10 move the decimal point **one** place to the **right**
- 100 move the decimal point **two** places to the **right**
- 1000 move the decimal point **three** places to the **right**

➢ **If you divide a decimal number by:**

- 10 move the decimal point **one** place to the **left**
- 100 move the decimal point **two** places to the **left**
- 1000 move the decimal point **three** places to the **left**



1.C Round Decimal to the Nearest Whole Number or Tenth

- ❖ We round numbers to make them simpler, faster, and more useful in daily life, while still keeping them close to the real value.

For example:

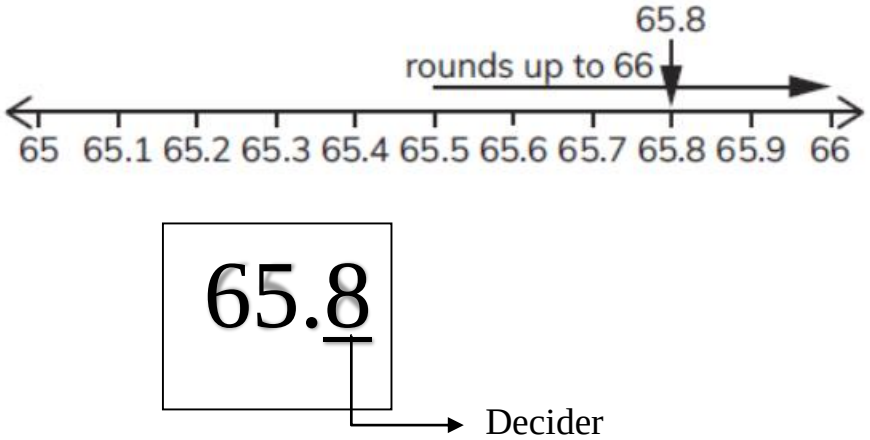
Prices are often rounded to the nearest cent.

Example: 3.354 JD is rounded to 4.35 JD

Sometimes the exact value is unnecessary.

Example: If the temperature is 23.456 °C, saying 23.5 °C is enough

You can round a number to the nearest whole number, for example 65.8 is rounded to 66 as follow:



- ❖ **The decider:** is the digit immediately to the right of the place value you are rounding to.

- ❖ If the decider is:
- **Less** than 5 so round down
- **5 or more** so round up

You can round a number to the nearest tenth, for example 23.56 is rounded to 23.6, since the decider is 6 and 6 is greater than 5.

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Name : _____ Date : 24 / 9 / 2025

Subject: Study sheet (2) Grade : 5 ( )

2.A Count On and Back

- **Count on** in math is a mental math strategy used to add numbers.
  (to move forward on the number line)

Examples:

- Omar wants to save money to buy a toy. He starts with £ 0.5 in his "bear bank" and saves £ 0.5 every day. On the first day, he has £ 0.5. The next day, £1.0. Then £1.5, £ 2.0, and so on. Each day he counts on by adding £ 0.5".

  Sequence: 0.5 , 1.0 , 1.5 , 2.0 , 2.5, …

- Sara walks every morning. On Monday, she walks 0.3 km. Each day she walks 0.2 km more than the previous day. Tuesday: 0.5 km, Wednesday: 0.7 km, Thursday: 0.9 km. She is counting on the distance in decimals.

  Sequence: 0.3 , 0.5 , 0.7 , 0.9 , 1.1 , 1.3 , 1.5 , …

- Start at 2.5, count on in 0.1

  2.5 , 2.6 , 2.7 , 2.8 , …

- Start at -0.5, count on in 0.2

  -0.5 , -0.3 , -0.1, 0.1, 0.3 , …

- **Count back** in math is a mental math strategy used to subtract numbers

  (to move backward on the number line).

Examples:

- Sara has $5 balance on her phone. Each call costs $ 0.7.
  After the first call her balance is $ 4.3.
  After the second call her balance is $ 3.6
  After the third call her balance is $ 2.9
  After the fourth call her balance is $ 2.2.
  She is counting back in decimals to know her remaining balance.

  Sequence: 5.0 , 4.3 , 3.6 , 2.9 , 2.2 , 1.5 , …

- A tablet has 10 hours of battery life. Each hour used decreases the battery by 0.5 hours. After the first hour: 9.5 hours left, then 9.0, 8.5, 8.0, 7.5, and so on. Counting back in decimals helps track battery life".

  Sequence: 10.0 , 9.5 , 9.0 , 8.5 , 8.0 , 7.5 , …

- Start at 5.0 and count back in 0.2.

  5.0 ,4.8 ,4.6 ,4.4 ,..

- Start at – 0.125 and count back in 0.05.

  -0.125 , -0.175 , - 0.225 , - 0.275

2.B Use the Order of Operations

- The **order of operations** is a rule that tells the correct sequence of steps for evaluating a math expression. We can remember the order using **BIDMAS**: **Brackets, Indices, Multiplication and Division (from left to right), Addition and Subtraction (from left to right)**.

The priority of operations gives the order in which a calculation should be worked out.

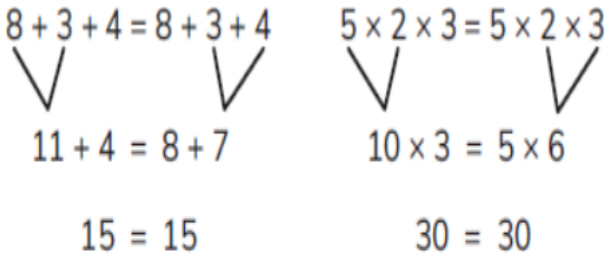
Brackets - any calculation in brackets should be worked out first

Multiplication and Division - these are next, if both multiplication and division occur, work left to right

Addition and Subtraction - this is calculated last. If both addition and subtraction occur, work left to right

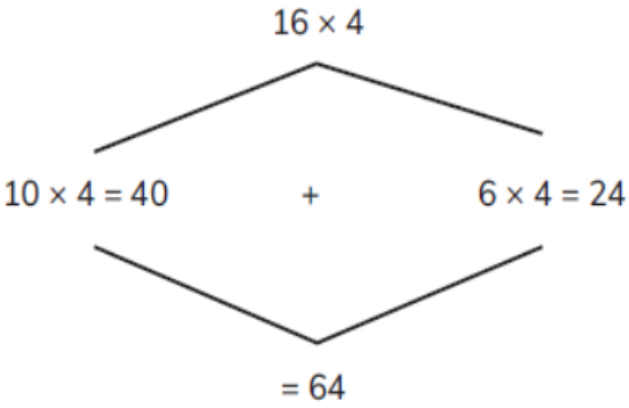
The laws of arithmetics

Associative law: when more than two numbers are added or multiplied, you can do the calculations in any order. For example:



Commutative law: when two numbers are added or multiplied, you can do the calculation in any order. For example:
7 + 4 = 4 + 7 = 11 and 7 × 5 = 5 × 7 = 35

Distributive law: when two numbers are multiplied, you can break the multiplication fact into a sum of two other multiplication facts. For example:



2.C Use Brackets

Why do we use brackets?

Brackets show us which part of the problem should be solved first.

They help us avoid mistakes and follow the order of operations.

Always calculate inside ( ) brackets first,

If there are brackets inside brackets, solve the innermost first

then continue with the rest of the operations

Remember:

Brackets change the result if you don't solve them first.

Work step by step → inside → outside

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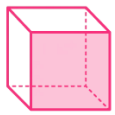
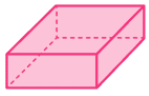
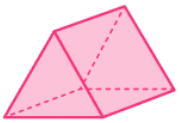
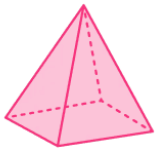
Name : _____ Date : / 11 / 2025

Subject: study sheet (4) / chapter (4) Grade : 5 ( )

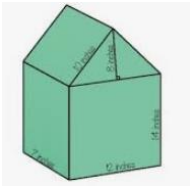
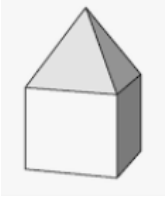
3D Shapes, Volume and Capacity

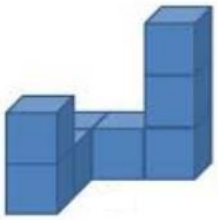
4.A Identify, Describe and Sketch Compound 3D Shapes

3D shapes are solid shapes that have 3 dimensions: **length, width** and **height (depth)**.

3D shape Name	Number of faces	Faces shapes	Number of edges	Number of vertices	Real life Example	3D shape figure
Cube	6	6 squares	12	8	Dice	
Cuboid	6	6 rectangles	12	8	Boxes	
Triangular Prism	5	2 triangles and 3 rectangles	9	6	Tobleron Chocolate	
Square – based Pyramid	5	1 square and 4 triangles	8	5	Egyptian Pyramid	
Triangular – based Pyramid	4	4 triangles	6	4	Some type of dice	

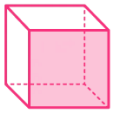
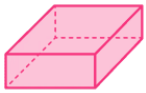
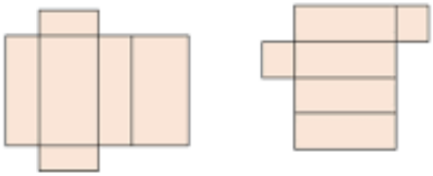
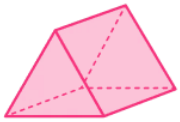
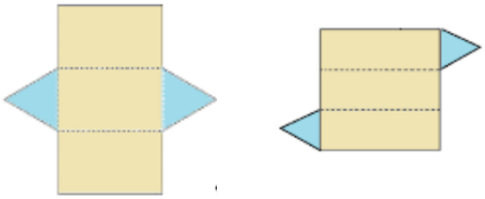
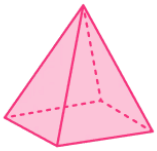
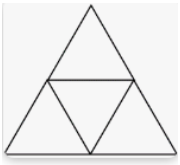
Compound 3D shapes: Shapes made by joining two or more 3D shapes together.



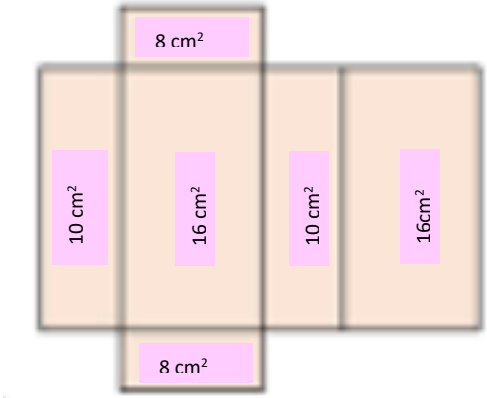
4.B Identify and Sketch Nets of 3D Shapes

A net is a 2D pattern that can be folded into a 3D shape. It shows all the faces of the shape laid flat.

3D shape Name	Net Example	3D shape figure	3D Nets
Cube	6 connected squares		
Cuboid	6 connected rectangles		
Triangular Prism	2 triangles and 3 rectangles		
Square – based Pyramid	1 square and 4 triangles		
Triangular –based Pyramid	4 triangles		

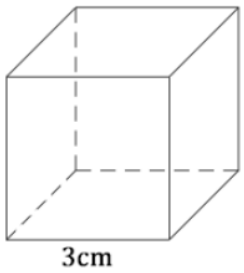
- You can find the surface are of any 3D shape by adding the area of faces in the 3D shape.

1.



Surface area = 10+16+10+16+8+8 = 68 cm^2

2.



Surface area = 6 × (3× 3) =54 cm^2

4.C Understand the Difference Between Volume and Capacity

1. What is Volume?

Volume is the **amount of space an object takes up**.

- It can refer to **solid objects or liquid**.
- We usually measure volume in **cubic units** like:
  - cubic centimeters (cm^3)
  - cubic meters (m^3)
- For example:
  - A box with length 3 cm, width 2 cm, and height 2 cm has a volume of: $3×2×2=12\ cm^3$

2. What is Capacity?

- **Capacity** is the greatest **amount of liquid a container can hold**.
- It tells us how much space is inside a container.
- We measure capacity in **liters *(l)*** and **milliliters *(ml)***.
- **1 *l* = 1000 *ml***

Simple way to remember:

Volume = space the object *takes up*
Capacity = space the object *can hold*

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