Kemnal Technology College

Year 10 Maths Term 6

ambitious minds

Week 1- Bearings

1. **When working with bearings remember –**

- Always work **clockwise** from **North**
- Always give a bearing in degrees as a **three figure number** (i.e. 045°)
- If a north line is not there add one to help you measure the bearing from north.
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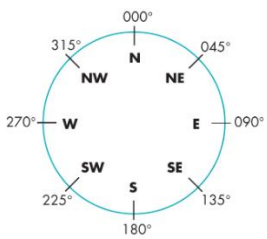
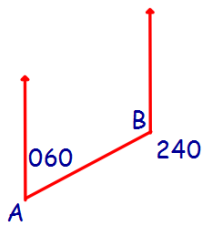


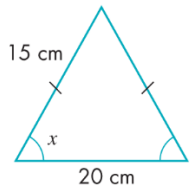


Bearing of B from A = 060
Bearing of A from B = 240

Week 2 – Properties of Isosceles Triangles

Remember if two angles of a triangle are the same or two sides are the same length then the triangle is isosceles.

1. An isosceles triangle can be split down the middle. To make 2 identical right angle triangles.
2. In Trigonometry this allows you to work out the height of the triangle and also its area.

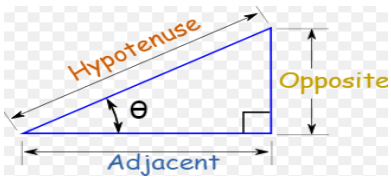


$x = \cos^{-1}(10/15)$
$x = 48.2°$
Height = 15 x sin 48.2
= 11.2
Area = 0.5 x 20 x 11.2
= 111.8 cm^2

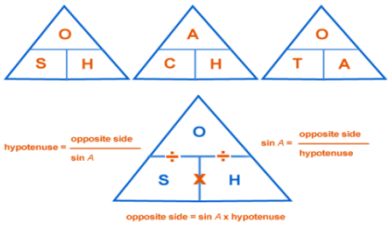
Week 3: Trigonometry

For a right angled Triangle. You can use SOH CAH TOA to find angles and length of sides.

- Step 1 label the sides leaving out the one with nothing against it.



- Step 2 select the triangle with the labelled sides.

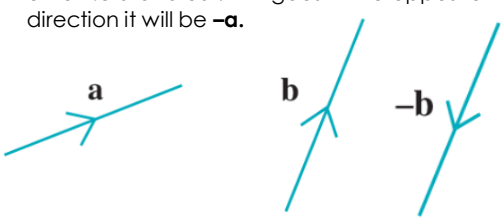


- Step 3 Perform the calculation

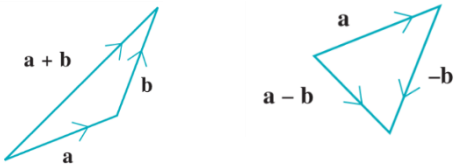
Week 4: Vectors

Vectors have two components Direction and Magnitude (length).

1. If two vectors are parallel. One is a factor of the other i.e **a** and **3a** . If it goes in the opposite direction it will be **–a.**



2. Vectors can be added to provide a resultant vector.



Week 5: Inequalities

1. Inequalities can be shown on a number line.

2. When solving inequalities solve as if it is an equation. But keep the sign as an inequality Symbol.

$$2x + 3 < 11$$
$$\Rightarrow 2x < 8$$
$$\Rightarrow x < 4$$

3. Remember when multiplying by a negative number the symbol gets reversed, > becomes<.

Week 6: Algebra rRview

1. **Expand Brackets –** You multiply everthing that is inside the brackets by what is outside the brackets.
2. **Factorise –** Opposite pf expanding brackets. Take common factor outside the brackets.
3. **Expanding Double Brackets –** multipy each term in one set of brackets by the ones in the other. i.e. FOIL (First Outer Inner Last)
4. **Solving Quadratics –** Find the numbers that when mulipled make the integer term and when added make the coefficient of the x term.