GRADE 9 MAPWORK

REVISION EXERCISES

DISTANCE

- SCALE   1 : 50 000

- Distance   = measurement (cm) X 50 000

                              100 000

          = km

DISTANCE

1. Trig beacon 9 (N2) to trig beacon 66 (I 16)
   Answer in km.
2. Length of the landing strip (G5). Answer in m
3. Trig beacon 104 (O8) to the house at Ifafi
   (Q 16). Answer in Km
4. Length of the N4 from W (M5) to the
   intersection with the R511 (E14) Answer in km
5. Width of the dam at its narrowest point (M9)
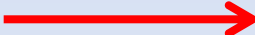   Answer in m.

DISTANCE ANSWERS

1. <u>16.2CM x 50 000</u>

    100 000   =   <u>8.1km</u>

2. <u>1.5cm x 50 000</u>

    100   =   <u>750m</u>

DISTANCE ANSWERS

3. $\underline{\text{9 cm x 50 000}}$

   100 000   = 4.5km

4. $\underline{\text{12.3 cm x 50 000}}$

   100 000   = 6.15km

5. $\underline{\text{2mm x 50 000}}$

   1000   = 100m

DIRECTION
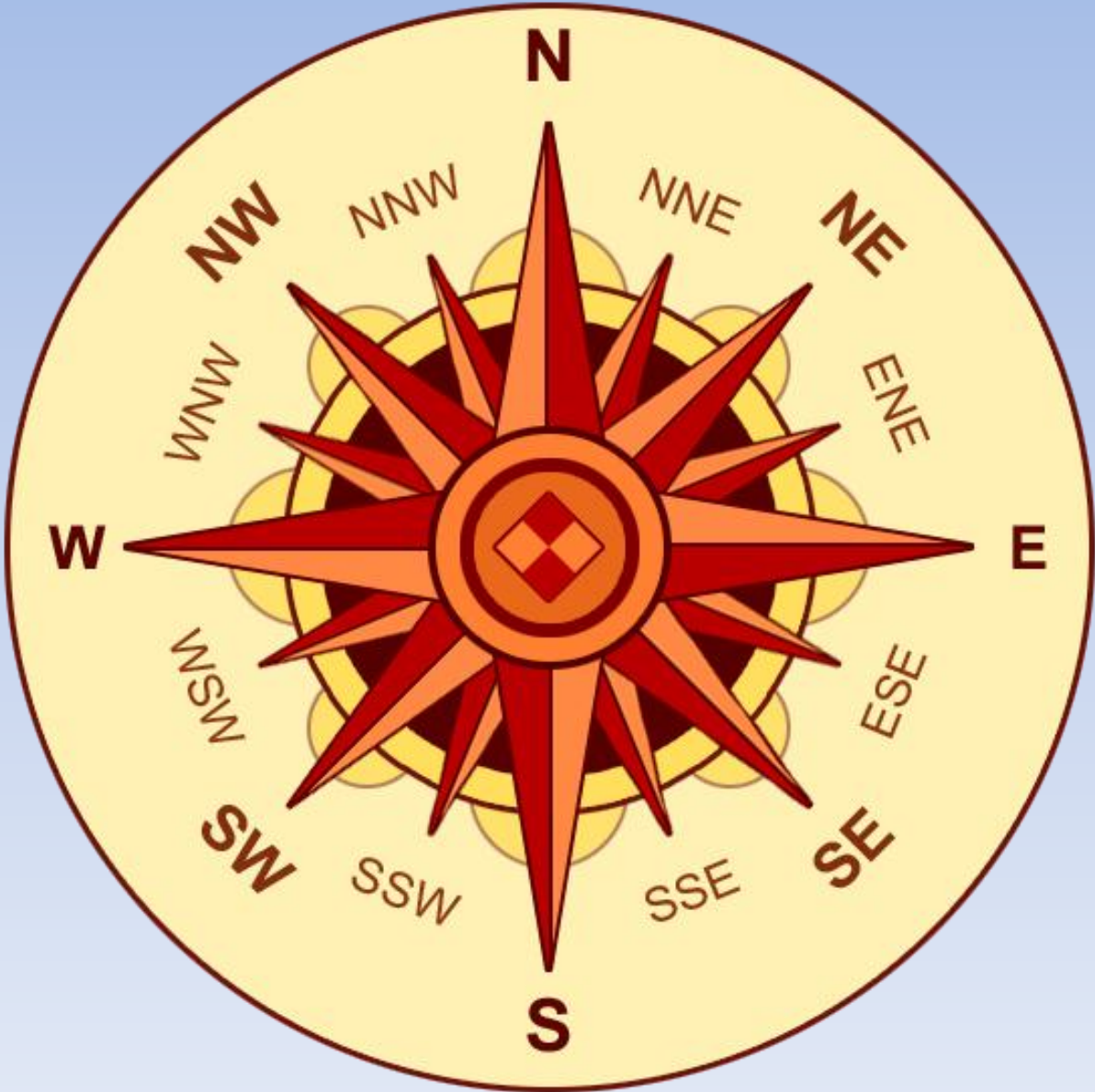
BEARING
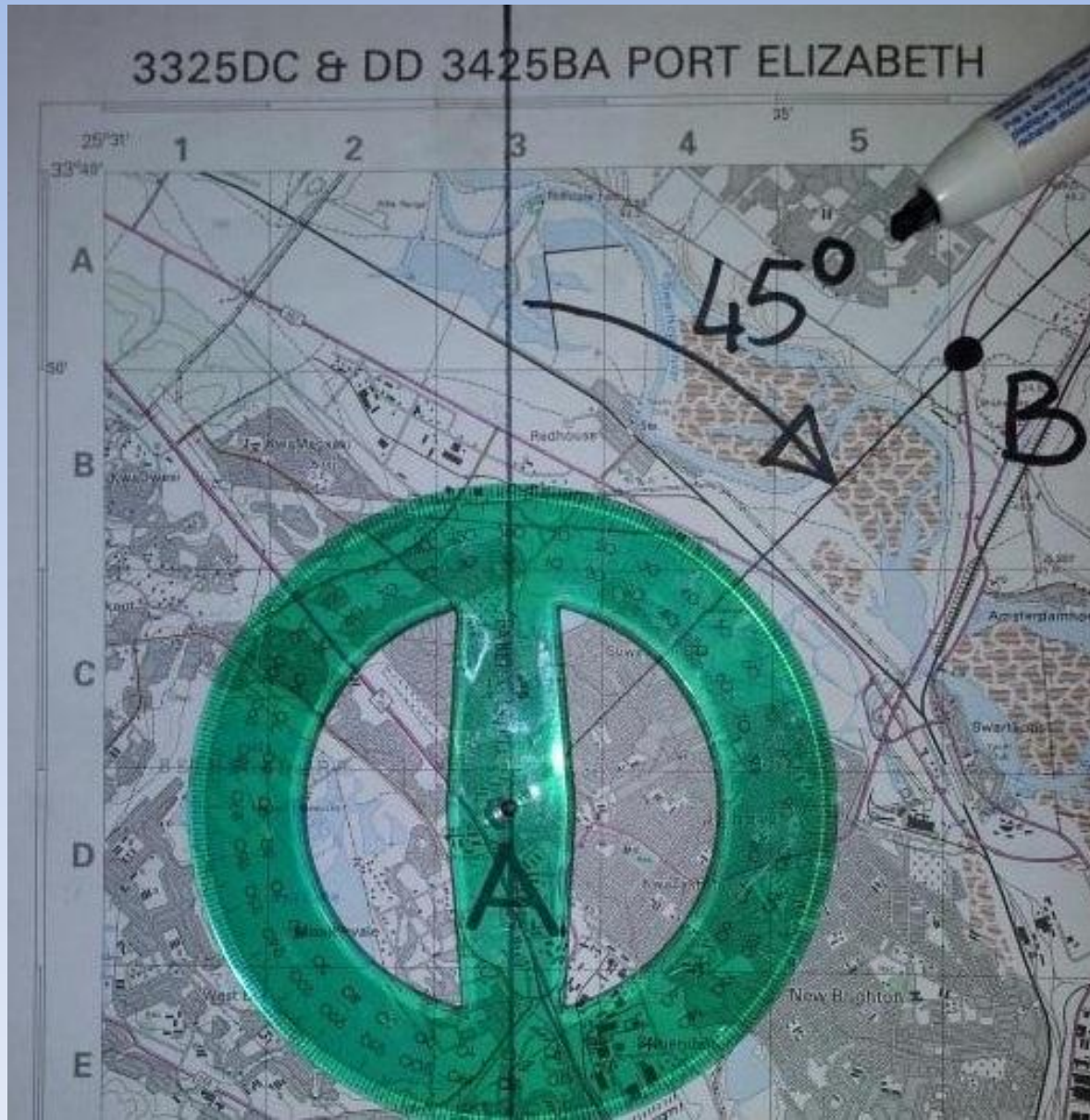
DIRECTION AND BEARING

1. Give the compass direction and true bearing for each of the following:

   1.1   Trig beacon 9 (N2) to Trig beacon 104 (P8)
   1.2   Trig beacon 9 to the windmill (Q6)
   1.3   Trig beacon 9 to the shop W (M5)
   1.4   Trig beacon 153 (F7) to Trig beacon 9
   1.5   Trig beacon 153 to trig beacon 104 (P8)
   1.6   Trig Beacon 153 to trig beacon 66 (I 16)
   1.7   Trig beacon 66 to the shop W (M5)
   1.8   Trig Beacon 66 to the windmill (Q6)

DIRECTION AND BEARING ANSWERS

1.1	E	97°
1.2	ESE	120 °
1.3	ENE	67 °
1.4	SSW	210 °
1.5	S	172 °
1.6	ESE	112 °
1.7	WSW	253 °
1.8	SW	233 °

AREA CALCULATIONS

Calculating the area of a square/rectangle:

A = L x B

L = 5cm

B = 3cm

AREA CALCULATIONS

Calculating the area of a square/rectangle:

$A = L \times B$

L = 5cm

B = 3cm

Answer in km²:

FIRST convert L and B to km

AREA CALCULATIONS
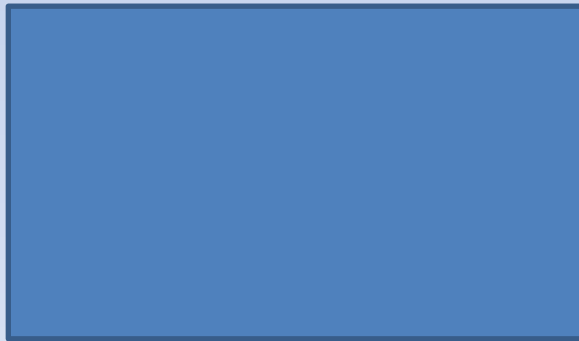
Calculating the area of a square/rectangle:

$A = L \times B$

Answer in km²:

FIRST convert L and B to km

L = 5cm

Length:

B = 3cm

$$\underline{5cm \times 50\ 000} \quad = \quad 2.5km$$
$$100\ 000$$

AREA CALCULATIONS

Calculating the area of a square/rectangle:

$A = L \times B$

Answer in km²:

FIRST convert L and B to km

L = 5cm

B = 3cm

Breadth:

$$\underline{\text{3cm x 50 000}} \quad = 1.5\text{km}$$
$$100\ 000$$

AREA CALCULATIONS

Calculating the area of a square/rectangle:

A = L x B

L = 5cm

B = 3cm

Answer in km²:

$$\frac{5cm \times 50\ 000}{100\ 000} = 2.5km$$

$$\frac{3cm \times 50\ 000}{100\ 000} = 1.5km$$
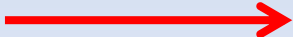
A = 2.5km x 1.5km

= 3.75km²

AREA EXERCISE

1. Find the FOUR clearly demarcated farms in blocks I 4 to L4/L5. Calculate the area of the northern most farm. Answer in m².

2. Calculate the area of the whole map.

    Answer in km².

3. Calculate the area of the triangular shaped land found in blocks D 17 and E 17.

    Answer in m².

AREA EXERCISE: ANSWERS

1.   A = L x B   L = 0.6cm

                         B = 0.6cm

L = $\underline{\text{0.6cm x 50 000}}$ =   300m
         100

B   (same as above)   =   300m

$\therefore$ A = 300m x 300m   =   90 000m^2

AREA EXERCISE: ANSWERS

2. A = L x B   L   =   18.4cm

                        B   =   18.2cm

L = $\underline{18.4cm \times 50\ 000}$ =   9.2km

         100 000

B = $\underline{18.2cm \times 50\ 000}$ =   9.1km

         100 000

A = 9.2km x 9.1km   = $83.72km^2$

AREA EXERCISE: ANSWERS

3.   A = ½B x ⊥H

⊥Height

B = $\underline{\text{2.5cm x 50 000}}$ = 1250m
                    100

⊥H = $\underline{\text{0.6cm x 50 000}}$ = 300m
                    100

B
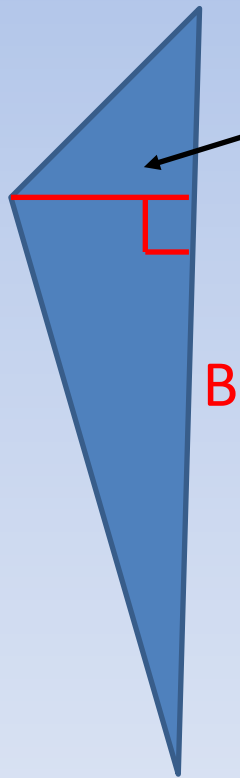
A = ½(1250m x 300m)

= 187 500m²

SPEED / DISTANCE / TIME
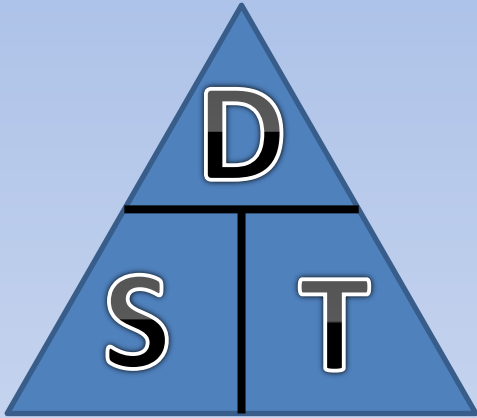
Speed = Distance/Time = km/h

Time = Distance/Speed = Hrs

Example: S = **?**

D = 100km

T = 2½ hrs

S = 100km/2.5

= 40km/h

SPEED/DISTANCE/TIME EXERCISE

1. A man plays a round of golf at the course in block G9 and walks a total distance of 7.5km. If he spends 2 hours walking, what is his average speed?

2. A car travels from the shop W (M5) along the R512, to the intersection with the R511 (E14). The car travels at a speed of 40km/h. How long will the trip take?

3. A hiker walks from the shop W (M5) directly to the trig beacon 104 (O8). The walk takes 40 minutes. What is his average walking speed?

ANSWERS

1.   S = ?

   D = 7.5km

   T = 2 Hrs

   $$S = \frac{7.5km}{2hrs}$$

   $$= 3.75km/h$$
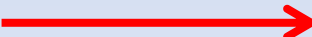
ANSWERS

2.   S = 40 km/h
        D = 12.4cm
        T = ?

Distance = $\underline{12.4\text{cm x }50\ 000}$ = 6.2km
                  100 000

        T = $\underline{6.2\text{km}}$ = 0.155hrs
          40km/h

     0.155hrs x 60 minutes   =   9 minutes

ANSWERS

3.   S =

     D = 4cm $\dfrac{\text{4cm x 50 000}}{\text{100 000}}$ = 2km

     T = 40 minutes   40/60   = 0.67hrs

S   = $\dfrac{\text{2km}}{\text{0.67hrs}}$

      = 3 km/h