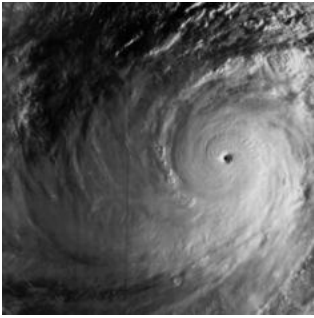


Natural Disaster Maths

Typhoon Tip Fact File

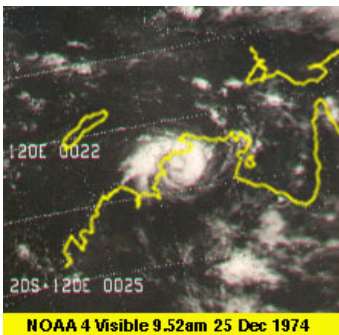


Typhoon Tip at its record peak intensity on October 12, 1979

Formed	October 4, 1979
Dissipated	October 19, 1979
Highest winds	305 km/h (190 mph) (1-minute sustained)
Lowest pressure	870 hPa (mbar) (Worldwide record low)
Fatalities	86 direct, 13 indirect
Damages	Unknown
Areas affected	Guam, Japan
Part of the 1979 Pacific typhoon season	

Source: http://en.wikipedia.org/wiki/Typhoon_Tip

Tropical Cyclone Tracy Fact File

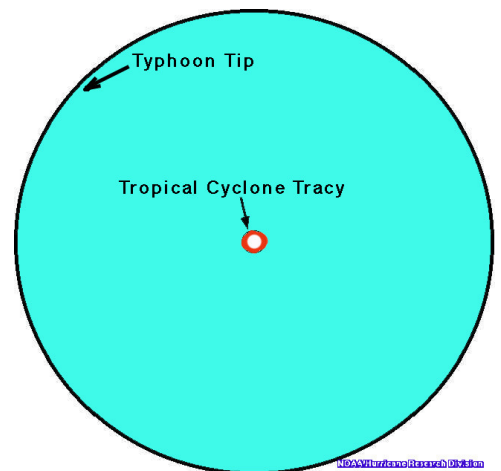


Formed	December 21, 1974
Dissipated	December 26, 1974
Highest winds	≥217 km/h[1] (135 mph) (disputed) (gusts)
Lowest pressure	950 hPa (mbar)[1]
Damage	\$4 billion (1998 AUD)[2] \$2.4 billion (1998 USD) \$4.73 billion (2005 USD)
Fatalities	71 direct
Areas affected	Darwin, Northern Territory
Part of the Pre-1980 Southern Hemisphere tropical cyclone seasons	

Source: http://en.wikipedia.org/wiki/Cyclone_Tracy

The diagram opposite is from the United States National Oceanic and Atmospheric Administration (NOAA) and shows the relative sizes of the largest and smallest tropical cyclones on record.

(Please note the size of a tropical cyclone does not always relate to how devastating it is. See fact files above for further information).



<http://www.aoml.noaa.gov/hrd/tcfaq/E5.html>



This worksheet has been produced as part of the *Global Skills Project*



Information Sheet - Drawing Circles

Key terms:

- ① Diameter is the distance from one side of a circle to the other measured through the centre.
- ① Radius is a line that joins the centre of a circle with any point on its circumference and is half the diameter.
- ① Circumference is the distance around a circle.

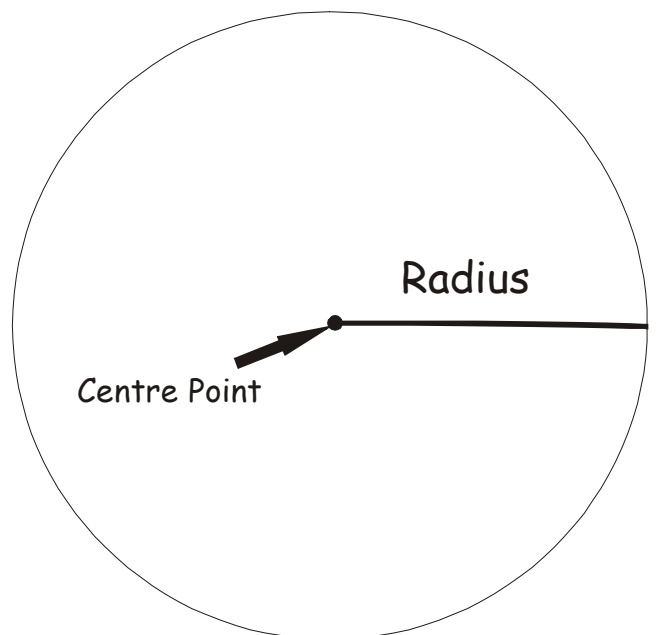
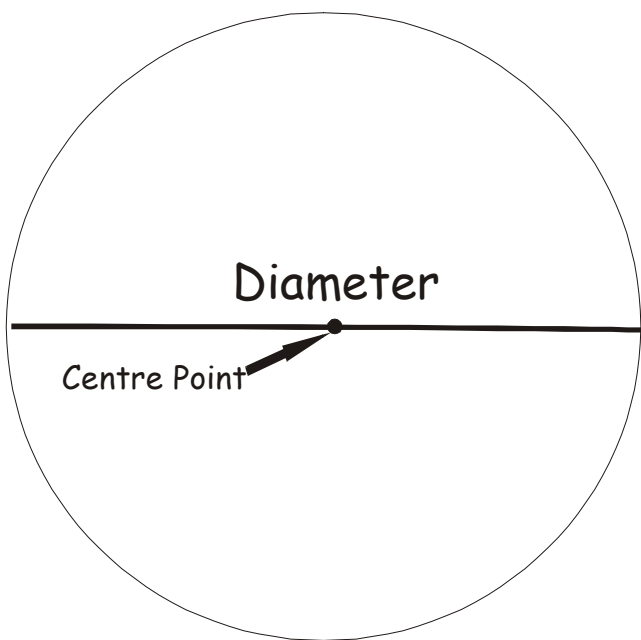
In order to draw a circle with a compass you must first find the radius of that circle. For example on the circle below:

Diameter = 8 cm

Radius (diameter \div 2) = 4 cm

Using a ruler set your compass to the radius of the circle - in this case 4 cm

The point where you put your compass tip will become the centre point of the circle.

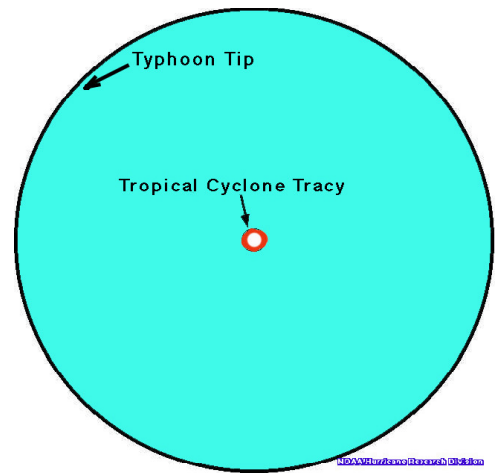


Natural Disaster Maths

Exercise - Drawing circles

- ① To do this exercise you will need a ruler, sharp pencil and compass.

Reproduce the above diagram of Typhoon Tip and Tropical Cyclone Tracy on the grid below. Each square on the grid is 5 mm across. The scale of the grid is shown below. Use a compass to draw the circles.



<http://www.aoml.noaa.gov/hrd/tcfaq/E5.html>

Instructions:

- ☁ You will need to find the radius of each circle, **which is half the diameter** (*see information below*). For example if the diameter was 100 miles then the radius would be $100 \div 2 = 50$
- ☁ Then you will need to convert this number from miles into millimetres according to the scale. For example if the radius was 50 miles using the scale of the grid which is 1 mm = 10 miles you would need to set your compass to 5 mm i.e. $50 \div 10 = 5$
- ☁ Finally set the compass to the length of the radius and use the centre point on the grid below.

Information:

- ☁ Typhoon Tip had a diameter of approximately 1350 miles
- ☁ Tropical Cyclone Tracy had a diameter of approximately 60 miles

Please note:

Tropical cyclones are in reality not perfect circles. The diagram you are creating is simply a *representation* of the largest and smallest tropical cyclones on record.

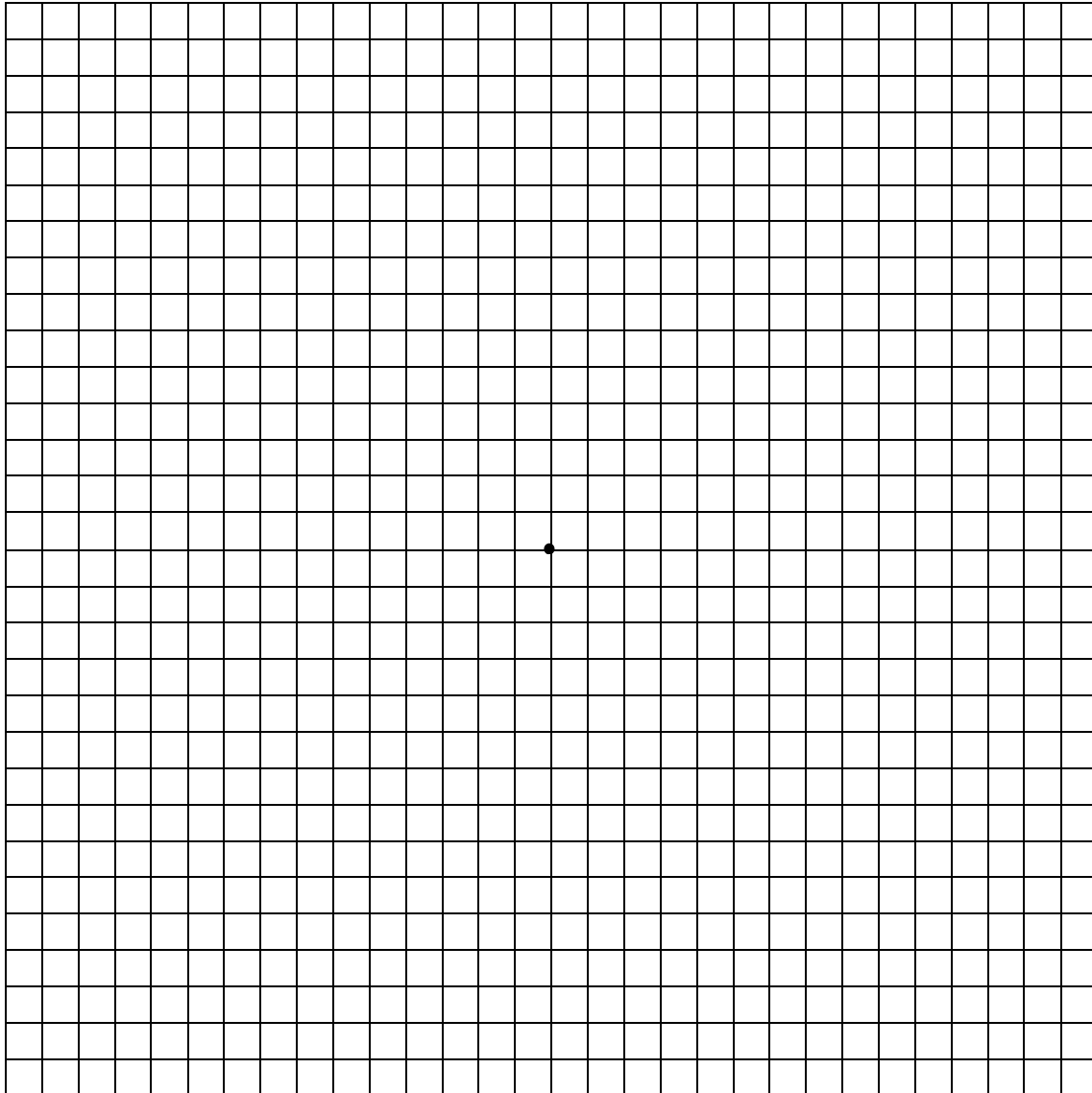


This worksheet has been produced as part of the Global Skills Project



Scale drawing of Typhoon Tip and Tropical Cyclone Tracy

Scale: 1 mm = 10 miles (therefore each 5 mm square = 50 miles)



This worksheet has been produced as part of the Global Skills Project



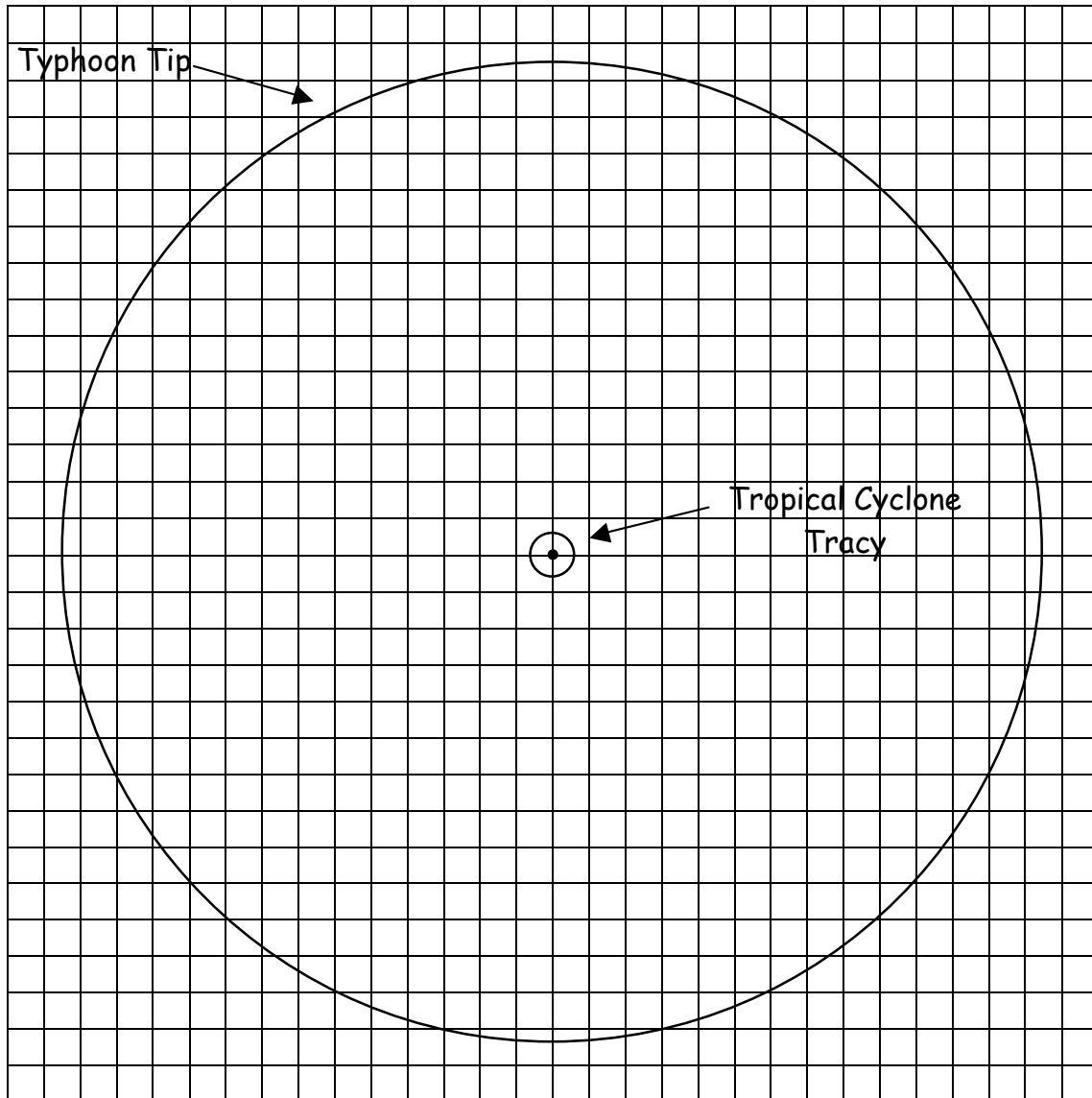
Natural Disaster Maths

Exercise - Measuring the Diameter of a circle

The diagram below is a scale drawing of the graphic representing Typhoon Tip and Cyclone Tracy on the previous page. Using a ruler measure the diameter of both circles and using the scale below convert this into miles.

Information:

Scale: 1 mm = 10 miles (therefore each 5 mm square = 50 miles)



Typhoon Tip:

Diameter in millimetres =

Diameter in miles =

Tropical Cyclone Tracy

Diameter in millimetres =

Diameter in miles =



This worksheet has been produced as part of the Global Skills Project

