

Maths Week 1: Geometry -Angles

L.O. To identify turns using the compass points.

A right angle is 90 degrees

2 right angles will be a straight line of 180 degrees

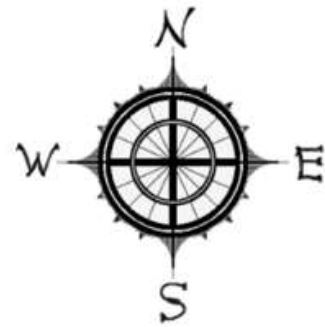
3 right angles is 270 degrees

4 right angles = a complete turn of 360 degrees

Have a go at these - perhaps use chalk in the garden or stand on a piece of paper with a simple compass drawn on it to physically turn yourself around the correct number of degrees.

In which direction would you be facing if you turned CLOCKWISE:

1. 180° from N _____
2. 90° from W _____
3. 90° from E _____
4. 180° from W _____
5. 270° from W _____
6. 360° from S _____
7. 270° from E _____
8. 360° from N _____
9. 90° from S _____



L.O. To be able to identify and recognise different angles.

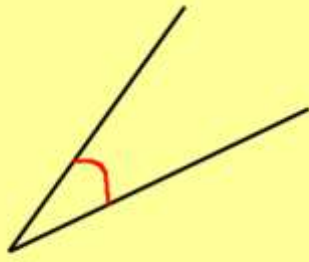
Learn:

An acute angle is less than 90 degrees.

An obtuse angle is more than 90 degrees but less than 180 degrees.

A right angle is 90 degrees.

A reflex angles is greater than 180 degrees, but less than 360 degrees.



It is an acute angle because it is less than 90 degrees.



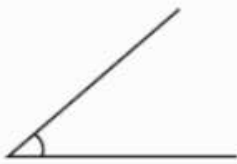
This is an obtuse angle because it is greater than 90°.

Can we make acute/obtuse/right angles with our arms?

That's what the lines around an angle are called - arms.

Label each of these angles as right, acute or obtuse:

a



angle

b



angle

c



angle

d



angle

e



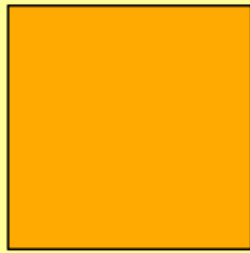
angle

f



angle

What are the angles in this square?

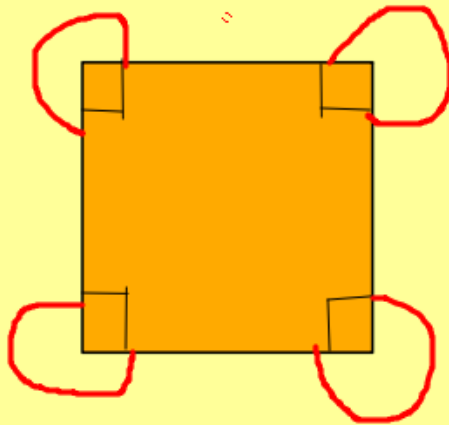


Think about the interior and exterior angles.

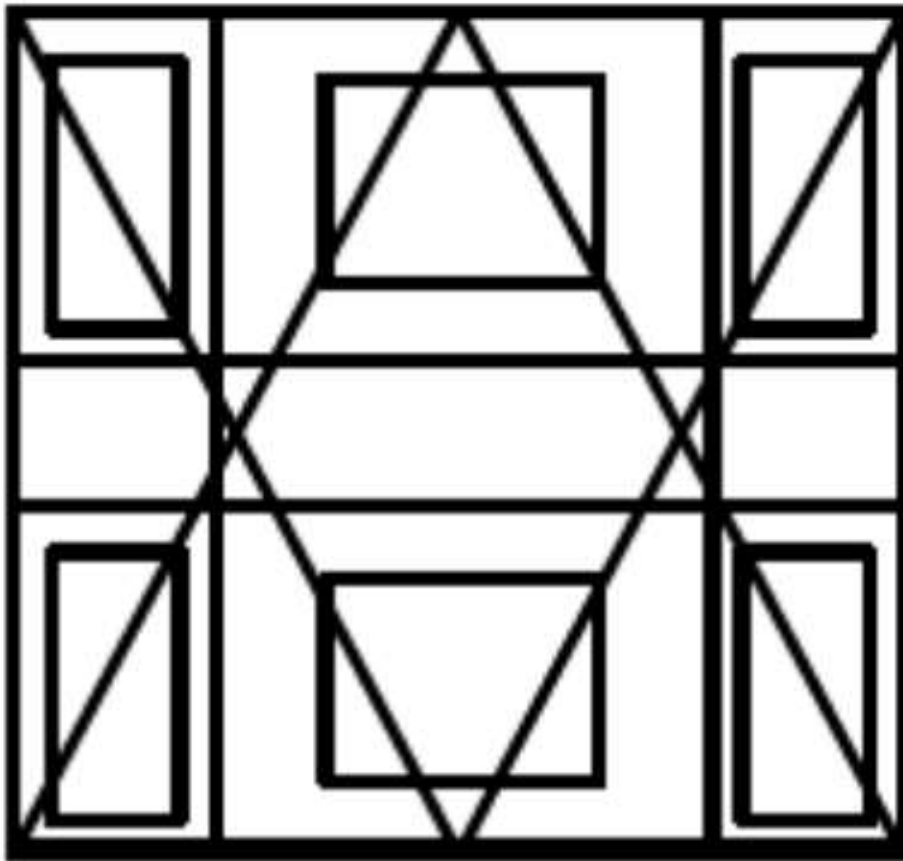
Interior - inside = black

Exterior - outside = red

What are the angles in this square?



- How many right angles can you find?



What other angles can you see?

Use a key system to label the different angles.

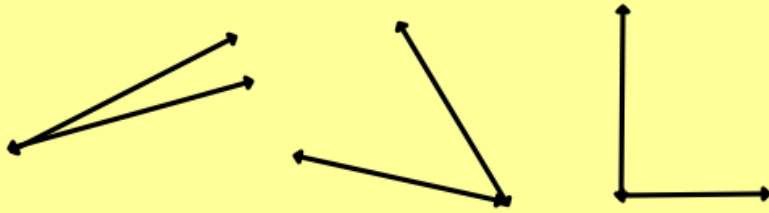
Tick all of the acute angles:

56 degrees

98 degrees

120 degrees

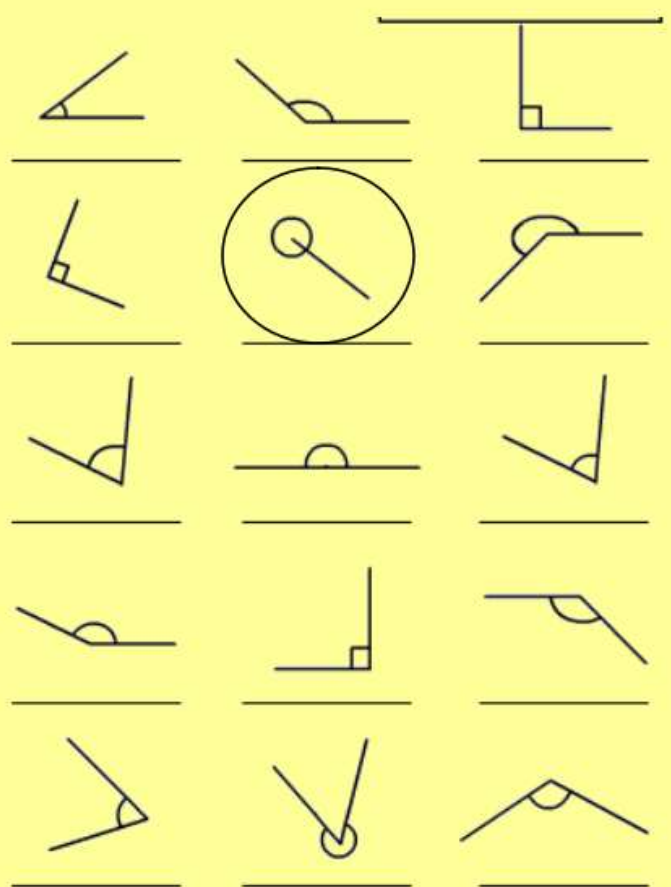
14 degrees



Talk task:

How could we sort these angles?

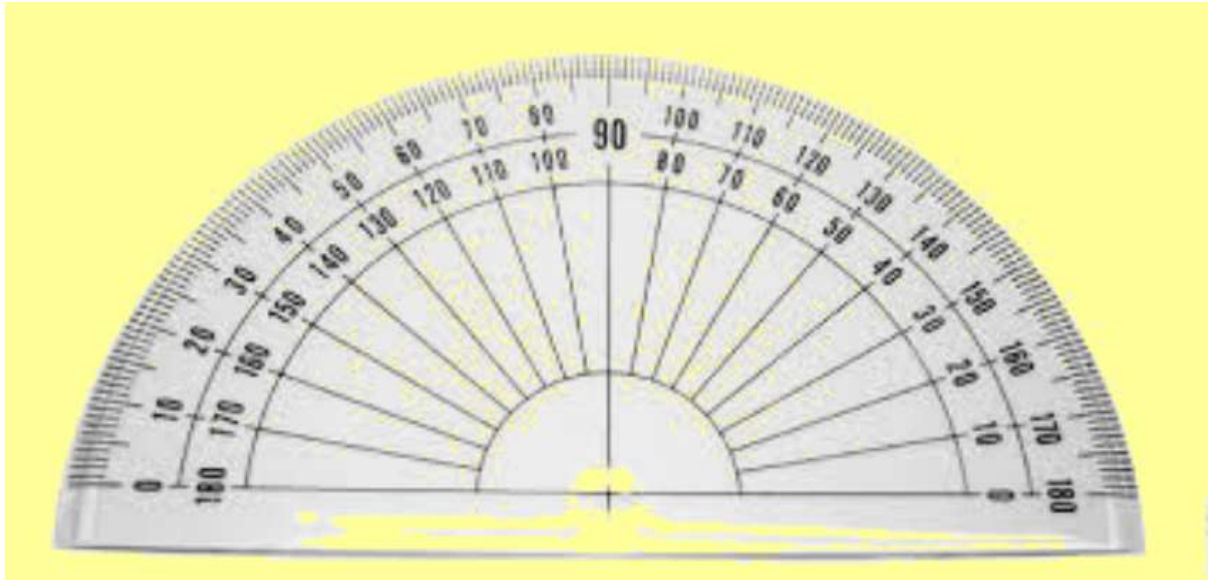
What criteria could we use?



L.O. To be able to measure angles accurately.

If you have a protractor, you can begin to learn how to measure angles. However, don't worry if you don't.

How to use a protractor:

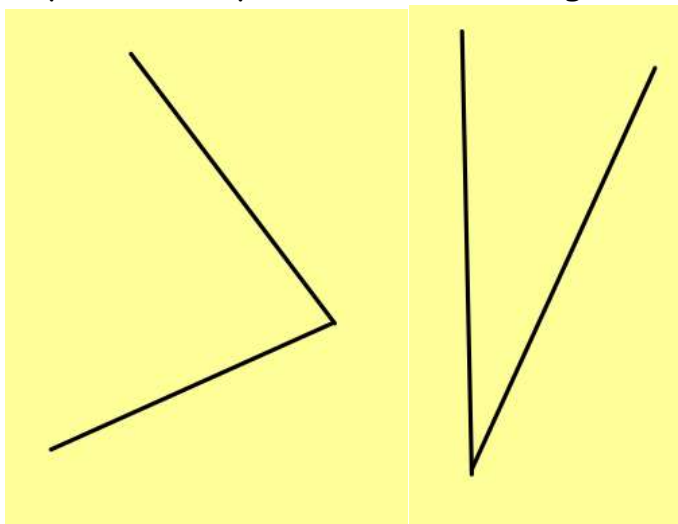


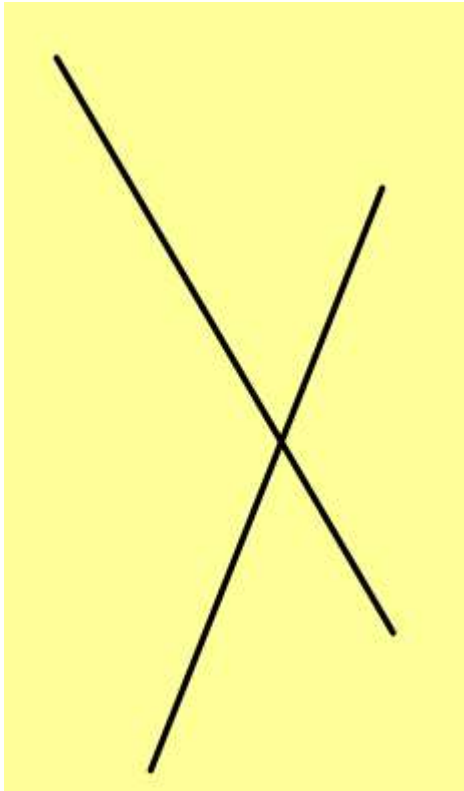
Lay the cross mark in the middle of the protractor on the point where the arms meet.

Line up one of the zeros on the scale with one arm of the angle.

See where its other arm touches the scale and read the measurement.

Label the angles below as acute, right-angle, obtuse or reflex. Then if you have a protractor, have a go at measuring the angles.





Answers:

How many right angles can you find?

right-angle
acute
obtuse
reflex

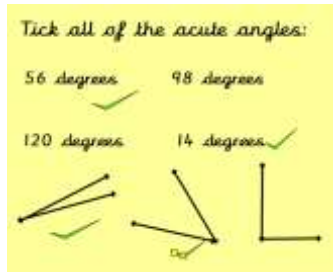
A complex geometric diagram on a yellow background. It features a 3x3 grid of squares. The central square is rotated 45 degrees. The four corner squares have a diagonal line from the top-left to the bottom-right. The four squares adjacent to the center have a diagonal line from the top-right to the bottom-left. Several right-angle symbols (small squares) are drawn in red at the intersections of the grid lines. Some acute angles are marked with blue arcs, and some obtuse angles are marked with green arcs. A yellow circle is on the left side, and a brown cloud-like shape is on the top right. A question mark is at the top right.

There are lots of different angles here.

Answers -

1. S 2. N 3. S 4. E 5. S 6. S 7. N 8. N 9. W

a) Acute b) right c) obtuse d) obtuse e) acute f) acute



Talk task:

How could we sort these angles?

What criteria could we use?

Sort as: acute/not acute

Smaller than 90 degrees/greater than 90 degrees

Reflex/not reflex

Others too.