Circles and Lines

The equation of a circle is
$(x+1)^2+(y+3)^2=17$

ATM

Circles and Lines

The equation of a circle is
$x^2+y^2+2x+6y=7$

ATM

Circles and Lines

A circle has centre
$(-1,-3)$ and radius $\sqrt{17}$

ATM

Circles and Lines

The line joining the points
$(-2,1)$ and $(0,-7)$ is a
diameter of the circle

ATM

Circles and Lines

The lines $y=x-2$ and
$y+2x+5=0$ cut at
the centre of the circle
The point $(-2,-7)$ lies on the circle

ATM

Circles and Lines

The equation of the tangent to the
circle at $(3,-4)$ is $y=4x-16$
The point $(3,-2)$ lies on the circle

ATM

Circles and Lines

The points $(0,1)$, $(3,-2)$ and
$(-5,-4)$ all lie on the circle

ATM

Circles and Lines

ATM

Circles and Lines

The equation of the normal to the
circle at $(-5,-2)$ is $4y+x+13=0$
The equation of the normal to the
circle at $(0,1)$ is $y=4x+1$

ATM

ATM Unit 7 Prime Industrial Park Shaftesbury Street Derby DE23 8YB Tel. 01332 346599 admin@atm.org.uk www.atm.org.uk