Precalc 10.2  $(x-)^2 + (y-)^2 = ($  Use and determine standard form for the equation of Precalc 10.2

a circle\*

Use and determine general form for the equation of a circle\*

Graph circles\*

Write the equation of a circle given three points on the circle

\*Alg 2 Ch. 10

conic models activity: play-doh

conic section

ellipse

parabola

hyperbola

degenerate conic

solve systems of equations

activ: Play-doh

Standard					
Form of the					
Equation of					
a Circle					

The standard form of the equation of a circle with radius r and center at  $(h,\ k)$  is

$$(x - h)^2 + (y - k)^2 = r^2.$$

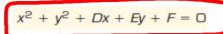
General Form of the Equation of a Circle The general form of the equation of a circle is

$$x^2 + y^2 + Dx + Ey + F = 0$$
,

where D, E, and F are constants.



C is involved when there is an xy term (retation) later in the chapter.



Write the standard form of the equation of the circle that passes through the points at (5, 3), (-2, 2), and (-1, -5). Then identify the center and radius of the circle.

Alg 2
Matrix equations
coefficient matrix
variable matrix
constant matrix

Set up equations & simplify Use technology to solve

Write the standard form of the equation of the circle that passes through the points at (5, 3), (-2, 2), and (-1, -5). Then identify the center and radius of the circle.