**6E Applying Circle Theorems**

1. The line 4x – 3y – 40 = 0 is a tangent to the circle (x – 2)2 + (y – 6)2 = 100 at P = (10,0). Show that the radius at P is perpendicular to this line.

1. A circle C has equation:

The line is a tangent to the circle and has gradient -3. Find the two possible equations for , giving your answers in the form .