

# 5-6 Equations of Circles in General Form PRACTICE

Convert each equation in general form to an equation in standard form by completing the square. Then graph the circle.

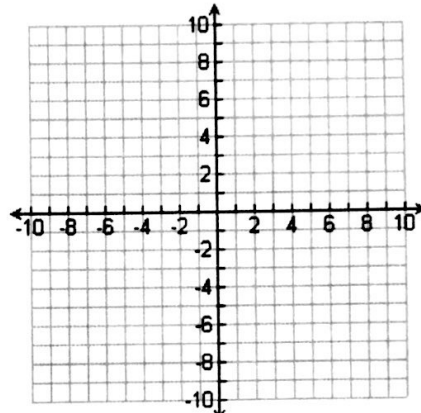
General:  $x^2 + y^2 + Cx + Dy + E = 0$

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

1)  $2x^2 + 2y^2 + 8x - 4y - 40 = 0$

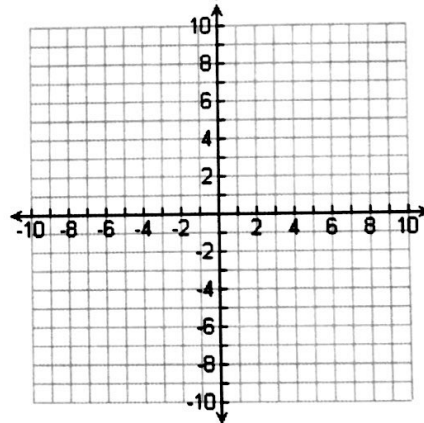
$$x^2 + y^2 + 4x - 2y - 20 = 0$$

$$(x+2)^2 + (y-1)^2 = 25$$



2)  $x^2 + y^2 + 4x + 4y + 4 = 9$

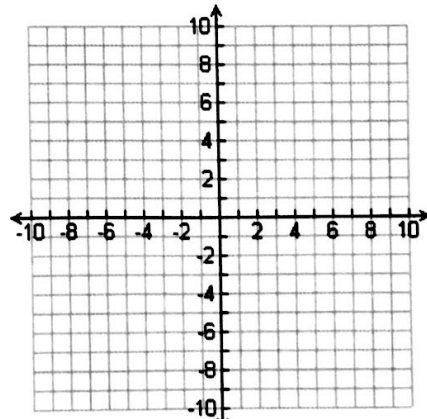
$$(x+2)^2 + (y+2)^2 = 13$$



3)  $3x^2 + 3y^2 + 18x - 6y + 27 = 0$

$$x^2 + y^2 + 6x - 2y + 9 = 0$$

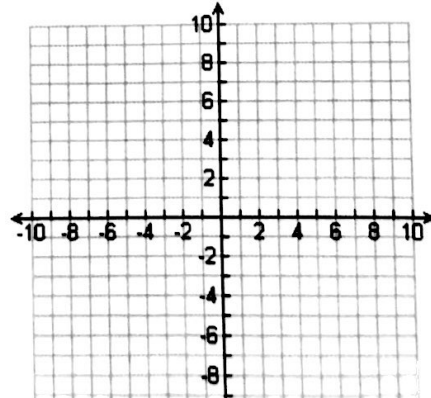
$$(x+3)^2 + (y-1)^2 = 1$$



4)  $5x^2 + 5y^2 + 20x - 35 = 0$

$$x^2 + y^2 + 4x - 7 = 0$$

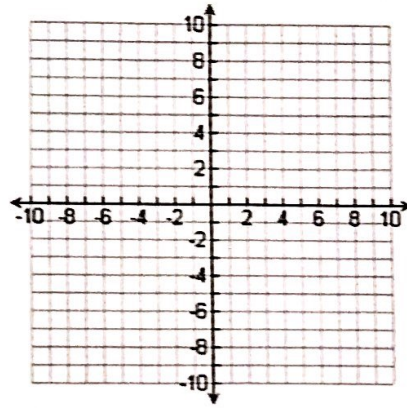
$$(x+2)^2 + y^2 = 11$$



$$4x^2 + 4y^2 + 32y - 36 = 0$$

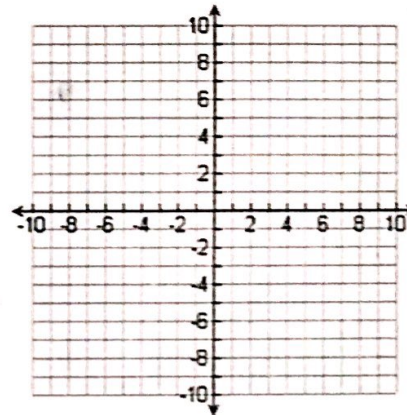
$$x^2 + y^2 + 8y - 9 = 0$$

$$(x+4)^2 + y^2 = 25$$



$$6) x^2 + y^2 - 12x - 16y + 88 = 4$$

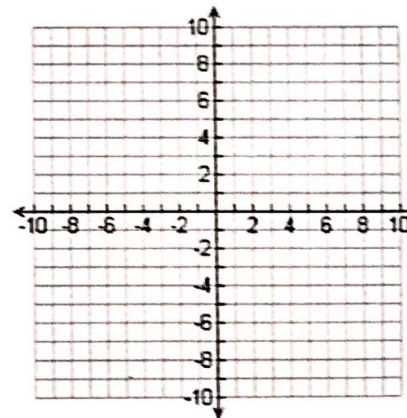
$$(x-6)^2 + (y-8)^2 = 16$$



$$7) 3x^2 + 3y^2 - 42x + 12y + 147 = 0$$

$$x^2 + y^2 - 14x + 4y + 49 = 0$$

$$(x-7)^2 + (y+2)^2 = 4$$



$$8) x^2 + y^2 + 2x + 1 = 18$$

$$(x+1)^2 + y^2 = 18$$

