

**Zadatak 36.** Odredi jednadžbu kružnice koja prolazi točkama  $A(4, 2)$  i  $B(8, 6)$  i dira os  $Oy$ .

**Rješenje.** Kružnica dira  $y$  os  $r = |p|$

$$(4 - p)^2 + (2 - q)^2 = p^2$$

$$(8 - p)^2 + (6 - q)^2 = p^2$$

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$$16 - 8p + p^2 + 4 - 4q + q^2 = p^2$$

$$64 - 16p + p^2 + 36 - 12q + q^2 = p^2$$

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$$q^2 - 4q - 8p + 20 = 0$$

$$q^2 - 12q - 16p + 100 = 0$$

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$$8q + 8p - 80 = 0$$

$$q + p = 10 \implies p = -q + 10$$

$$20 + 8q - 80 + 4 - 4q + q^2 = 0$$

$$q^2 + 4q - 60 = 0$$

$$q_{1,2} = \frac{-4 \pm \sqrt{16 + 240}}{2} = \frac{-4 \pm 16}{2} = -2 \pm 8$$

$$q_1 = 6, \quad p_1 = 4$$

$$q_2 = -10, \quad p_2 = 20$$

$$(x - 4)^2 + (y - 6)^2 = 16,$$

$$(x - 20)^2 + (y + 10)^2 = 400.$$