

$$d = r \Leftrightarrow \frac{|4 \cdot a + 3 \cdot \frac{1}{2}a - 24|}{\sqrt{4^2 + 3^2}} = \frac{|\frac{11}{2}a - 24|}{5} = |\frac{1}{2}a| \cdot 1,5$$

$$\Leftrightarrow |\frac{11}{2}a - 24| = 5 \cdot |\frac{1}{2}a| \quad (5 \geq 0)$$

$$\Leftrightarrow |\frac{11}{2}a - 24| = |5 \cdot \frac{1}{2}a|$$

$$\Leftrightarrow \frac{11}{2}a - 24 = \frac{5}{2}a \quad \text{bzw.} \quad \frac{11}{2}a - 24 = -\frac{5}{2}a$$

$$\Leftrightarrow a = 8 \quad \text{bzw.} \quad a = 3$$

$$a = 8: \quad \underline{(x-8)^2 + (y-4)^2 = 4^2}$$

$$a = 3: \quad \underline{(x-3)^2 + (y-\frac{3}{2})^2 = (\frac{3}{2})^2}$$

$$|\frac{11}{2}a - 24| = |7|$$