

11.4 Lösungen

$$1. \quad \begin{aligned} \text{a) } A &= \frac{\pi}{4} \cdot (d_2^2 - d_1^2) \\ \text{b) } A &= \underline{\underline{1385,44}} \quad [\text{mm}^2] \end{aligned}$$

$$6. \quad \begin{aligned} \text{a) } A &= \frac{r^2 \cdot \pi}{8} \\ \text{b) } A &= \underline{\underline{402,12}} \quad [\text{cm}^2] \end{aligned}$$

$$2. \quad \begin{aligned} \text{a) } A &= \frac{d^2 \cdot \pi}{4} \cdot \left(1 - \frac{\alpha}{360^\circ}\right) \\ U &= d \cdot \left[\pi \cdot \left(1 - \frac{\alpha}{360^\circ}\right) + 1\right] \\ \text{b) } A &= \underline{\underline{1231,50}} \quad [\text{mm}^2] \\ U &= \underline{\underline{159,29}} \quad [\text{mm}] \end{aligned}$$

$$7. \quad \begin{aligned} \text{a) } A &= a^2 \cdot \left(\frac{4 - \pi}{2}\right) \\ \text{b) } A &= \underline{\underline{31,01}} \quad [\text{cm}^2] \end{aligned}$$

$$8. \quad \begin{aligned} \text{a) } A &= \underline{\underline{2,66}} \cdot (R^2 - r^2) \\ \text{b) } A &= \underline{\underline{5'536,18}} \quad [\text{mm}^2] \end{aligned}$$

$$3. \quad \begin{aligned} \text{a) } U &= \underline{\underline{2 \cdot \sqrt{A \cdot \pi}}} \\ \text{b) } U &= \underline{\underline{24,25}} \quad [\text{cm}] \end{aligned}$$

$$9. \quad \begin{aligned} \text{a) } A &= a^2 \cdot \left(\frac{\pi - 2}{2}\right) \\ U &= \underline{\underline{2 \cdot a \cdot \pi}} \\ \text{b) } A &= \underline{\underline{1155,86}} \quad [\text{mm}^2] \\ U &= \underline{\underline{282,74}} \quad [\text{mm}] \end{aligned}$$

$$4. \quad \begin{aligned} \text{a) } A &= a^2 \cdot \left(\frac{\pi - 2}{2}\right) \\ U &= \underline{\underline{a \cdot \pi}} \\ \text{b) } A &= \underline{\underline{14,27}} \quad [\text{cm}^2] \\ U &= \underline{\underline{15,71}} \quad [\text{cm}] \end{aligned}$$

$$10. \quad A = r^2 \cdot \frac{(\sqrt{8} + 2) \cdot 2 - \pi}{4}$$

$$5. \quad \begin{aligned} \text{a) } A &= \frac{d^2 \cdot \pi}{16} \\ \text{b) } A &= \underline{\underline{490,87}} \quad [\text{mm}^2] \end{aligned}$$

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