

VÁLEC - cvičení - řešení

1. nálec; $r = 8 \text{ cm}$, $n = 5 \text{ cm}$; $V = ?$, $S = ?$

$$V = \pi r^2 \cdot n$$

$$V = 3,14 \cdot 64 \cdot 5$$

$$V = 3,14 \cdot 320$$

$$V = 1004,8 \text{ cm}^3$$

$$\begin{array}{r} 64 \\ \cdot 5 \\ \hline 320 \\ 6280 \\ 992 \\ \hline 100480 \end{array}$$

$$S = 2\pi r^2 + 2\pi r n$$

$$S = 6,28 \cdot 64 + 6,28 \cdot 40$$

$$S = 401,92 + 251,2$$

$$S = 653,12 \text{ cm}^2$$

$$\begin{array}{r} 8 \cdot 5 \\ 6,28 \cdot 64 \\ \hline 401,92 \\ 6,28 \cdot 40 \\ \hline 251,2 \\ 401,92 \\ 251,2 \\ \hline 653,12 \end{array}$$

2. nálec: $d = 12 \text{ cm}$, $n = 15 \text{ cm}$; $V = ?$, $S = ?$

! $r = 6 \text{ cm}$

$$V = \pi r^2 \cdot n$$

$$V = 3,14 \cdot 36 \cdot 15$$

$$V = 3,14 \cdot 540$$

$$V = 1695,6 \text{ cm}^3$$

$$\begin{array}{r} 36 \\ \cdot 15 \\ \hline 180 \\ 36 \\ \hline 540 \\ 12560 \\ 1570 \\ \hline 169560 \end{array}$$

$$S = 2\pi r^2 + 2\pi r n$$

$$S = 6,28 \cdot 36 + 6,28 \cdot 90$$

$$S = 226,08 + 565,2$$

$$S = 791,28 \text{ cm}^2$$

$$\begin{array}{r} 15 \cdot 6 \\ 6,28 \cdot 36 \\ \hline 226,08 \\ 6,28 \cdot 90 \\ \hline 565,2 \\ 226,08 \\ 565,2 \\ \hline 791,28 \end{array}$$

3. nálec: $r = 70 \text{ cm}$, $n = 11 \text{ dm}$; $V = ?$, $S = ?$

! $n = 7 \text{ dm}$

$$V = \pi r^2 \cdot n$$

$$V = 3,14 \cdot 49 \cdot 11$$

$$V = 1692,46 \text{ dm}^3$$

$$\begin{array}{r} 49 \\ \cdot 11 \\ \hline 49 \\ 539 \\ \hline 539 \\ 1570 \\ \hline 169246 \end{array}$$

$$S = 2\pi r^2 + 2\pi r n$$

$$S = 6,28 \cdot 49 + 6,28 \cdot 77$$

$$S = 307,72 + 483,56$$

$$S = 791,28 \text{ dm}^2$$

$$\begin{array}{r} 11 \cdot 7 \\ 6,28 \cdot 49 \\ \hline 307,72 \\ 6,28 \cdot 77 \\ \hline 483,56 \\ 307,72 \\ 483,56 \\ \hline 791,28 \end{array}$$

* Úkol pro Borce *

4. nálec; $V = 169,56 \text{ m}^3$, $r = 3 \text{ m}$, $S = ?$

$$V = \pi r^2 \cdot n$$

$$169,56 = 3,14 \cdot 9 \cdot n$$

$$169,56 = 28,26 \cdot n$$

$$n = 169,56 : 28,26$$

$$n = 6 \text{ m}$$

$$\begin{array}{r} 3,14 \\ \cdot 9 \\ \hline 28,26 \\ 169,56 : 28,26 = 6 \\ 0000 \\ 6,28 \cdot 9 \\ \hline 56,52 \\ 6,28 \cdot 18 \\ \hline 113,04 \\ 56,52 \\ \hline 169,56 \end{array}$$

$$S = 2\pi r^2 + 2\pi r n$$

$$S = 6,28 \cdot 9 + 6,28 \cdot 18$$

$$S = 56,52 + 113,04$$

$$S = 169,56 \text{ m}^2$$

$$\begin{array}{r} 6 \cdot 3 \\ 6,28 \cdot 9 \\ \hline 56,52 \\ 6,28 \cdot 18 \\ \hline 113,04 \\ 56,52 \\ \hline 169,56 \end{array}$$