

$$t' = \frac{1}{6} \frac{1}{2\sqrt{144+x^2}} \cdot 2x - \frac{1}{10} = \frac{x}{6\sqrt{144+x^2}} - \frac{1}{10}$$

$$t' = 0 \Leftrightarrow \frac{x}{6\sqrt{144+x^2}} = \frac{1}{10}$$

$$10x = 6\sqrt{144+x^2}$$

$$100x^2 = 36(144+x^2)$$

$$64x^2 = 36 \cdot 144 \Rightarrow$$

$$x^2 = \frac{36 \cdot 144}{64}$$

$$x = \pm \frac{6 \cdot 12}{8} = \pm \frac{72}{8} = \pm 9$$

(0.5)

\Rightarrow $x=9$ kandidat na min.

	$x=1$	$x=16$
t'	\ominus	\oplus
t	\searrow	\nearrow
	9	16
	min	

\Rightarrow v bodu $x=9$ je minimum
čas.

(0.2)

$$t(9) = \frac{\sqrt{144+81}}{6} + \frac{7}{10} = \frac{\sqrt{225}}{6} + \frac{7}{10}$$

$$t(9) = \frac{15}{6} + \frac{7}{10} = \frac{5}{2} + \frac{7}{10} = \underline{\underline{3.2 \text{ hod}}}$$

(0.1)

(1.5)

(1.7)