

ΛΥΣΗ

α)

$$\left. \begin{array}{l} B\Gamma^2 = 6^2 = 36 \\ AB^2 + A\Gamma^2 = 5^2 + 5^2 = 50 \end{array} \right\} \text{ \u03b1\u03c1\u03b1 } B\Gamma^2 < AB^2 + A\Gamma^2 \text{ \u03c9\u03c3\u03c4\u03b5 \u03ba\u03b9 } \widehat{A} < 90^\circ.$$

\u038c\u03bc\u03c9\u03c3 \u03b7 \widehat{A} \u03b5\u03b9\u03bd\u03b1 \u03b7 \u03bc\u03b5\u03b3\u03b1\u03bb\u03c5\u03c4\u03b5\u03c1\u03b7 \u03b3\u03c9\u03bd\u03b9\u03ac \u03c4\u03bf\u03c5 \u03b1\u03c6\u03bf\u03cd \u03b2\u03c1\u03b9\u03c3\u03ba\u03b5\u03c4\u03b1\u03b9 \u03b1\u03c0\u03b5\u03bd\u03b1\u03bd\u03c4\u03b9 \u03b1\u03c0\u03cc \u03c4\u03b7\u03bd \u03bc\u03b5\u03b3\u03b1\u03bb\u03c5\u03c4\u03b5\u03c1\u03b7 \u03c0\u03bb\u03b5\u03c5\u03c1\u03ac \u03c4\u03bf\u03c5, \u03c9\u03c3\u03c4\u03b5 \u03ba\u03b9 \u03cc\u03b9 \u03ac\u03bb\u03bb\u03b5\u03c3 \u03b3\u03c9\u03bd\u03b9\u03b5\u03c3 \u03b8\u03b1 \u03b5\u03b9\u03bd\u03b1 \u03cc\u03be\u03b9\u03b5\u03c3, \u03b1\u03c1\u03b1 \u03c4\u03bf \u03c4\u03c1\u03b9\u03b3\u03c9\u03bd\u03bf \u03b5\u03b9\u03bd\u03b1 \u03cc\u03be\u03c5\u03b3\u03c9\u03bd\u03b9\u03bf.

\u03b2) \u039c\u03b5 \u03b5\u03c6\u03b1\u03c1\u03bc\u03bf\u03b3\u03b7 \u03c4\u03bf\u03c5 \u03c4\u03c5\u03c0\u03bf\u03c5 \u03c4\u03bf\u03c5 \u038c\u03c1\u03c9\u03bd\u03b1 $(AB\Gamma) = \sqrt{\tau \cdot (\tau - \alpha) \cdot (\tau - \beta) \cdot (\tau - \gamma)}$

$$\text{\u03ba\u03b9 } \tau = \frac{\alpha + \beta + \gamma}{2} = \frac{5 + 6 + 5}{2} = 8$$

$$\text{\u03c0\u03c1\u03cc\u03ba\u03c5\u03c0\u03c4\u03b5\u03b9 } (AB\Gamma) = \sqrt{8 \cdot (8 - 5) \cdot (8 - 6) \cdot (8 - 5)} = \sqrt{8 \cdot 3 \cdot 2 \cdot 3} = 12 \text{ \u03c4.}\mu.$$

\u03b3) \u039c\u03b1 \u03c4\u03c1\u03b9\u03b3\u03c9\u03bd\u03b1 $AB\Gamma$ \u03ba\u03b9 $AB\Delta$ \u03b5\u03c7\u03bf\u03bd \u03c0\u03b1\u03c1\u03b1\u03c0\u03bb\u03b7\u03c1\u03c9\u03bc\u03b1\u03c4\u03b9\u03ba\u03b5\u03c3 \u03c4\u03b9\u03c3 \u03b3\u03c9\u03bd\u03b9\u03b5\u03c3 $\widehat{A}B$ \u03ba\u03b9 $\widehat{B}\Delta$, \u03c9\u03c3\u03c4\u03b5 \u03cc \u03bb\u03cc\u03b3\u03bf\u03c3 \u03c4\u03c9\u03bd \u03b5\u03bc\u03b2\u03b1\u03b4\u03c9\u03bd \u03c4\u03bf\u03c5\u03c3 \u03b5\u03b9\u03bd\u03b1 \u03b9\u03c3\u03bf\u03c3 \u03bc\u03b5 \u03c4\u03cc \u03bb\u03cc\u03b3\u03bf \u03c4\u03c9\u03bd \u03b3\u03b9\u03bd\u03cc\u03bc\u03b5\u03bd\u03c9\u03bd \u03c4\u03c9\u03bd \u03c0\u03bb\u03b5\u03c5\u03c1\u03c9\u03bd \u03c0\u03bf\u03c5 \u03c0\u03b5\u03c1\u03b9\u03b5\u03c7\u03bf\u03bd \u03c4\u03b9\u03c3 \u03b3\u03c9\u03bd\u03b9\u03b5\u03c3 \u03b1\u03c5\u03c4\u03b5\u03c3.

$$\frac{(AB\Delta)}{(AB\Gamma)} = \frac{AB \cdot \Delta D}{AB \cdot A\Gamma} = \frac{10}{5} = 2$$

$$\text{\u03c9\u03c3\u03c4\u03b5 \u03b8\u03b1 \u03b9\u03c3\u03c7\u03c5\u03b5\u03b9 } (AB\Delta) = 2 \cdot (AB\Gamma) = 24 \text{ \u03c4.}\mu.$$