Rešitve

$$\overrightarrow{e}$$

1. $\overrightarrow{r_M} = \overrightarrow{r_A} + \frac{2}{5}\overrightarrow{AB} = \ldots = (\frac{11}{5}, -2, -1)$
   $\cos\varphi = \frac{\overrightarrow{r_A} \cdot \overrightarrow{r_A}}{|\overrightarrow{r_A}||\overrightarrow{r_A}|} = \ldots = \frac{-2}{\sqrt{450}} \Rightarrow \varphi = 95°24'$
2. $\overrightarrow{r_D} = \overrightarrow{r_A} + \overrightarrow{r_C} - \overrightarrow{r_B} = (-7, -4) \Rightarrow D(-7, -4)$
   $\overrightarrow{SA} = \overrightarrow{CS} \to \overrightarrow{SA} = \overrightarrow{SC}$
3. $\overrightarrow{AC} = 3\sqrt{2}, \overrightarrow{BC} = 3, \overrightarrow{AB} = 3$, trikotnik je enakokrak
   $\overrightarrow{v} \perp \overrightarrow{r_A} \Leftrightarrow (m, 0, m^2 - 2) \cdot (3, 4, 3) = 0 \to m_1 = -2, m_2 = 1 \Rightarrow \overrightarrow{v_1} = (-2, 0, 2), \quad \overrightarrow{v_2} = (1, 0, -1)$
   $\overrightarrow{AB} = -\frac{8}{3}\overrightarrow{u}$ vektorja sta lin. odvisna
4. s kosinusnim izrekom v trikotniku s stranicami 10 cm,10 cm, 12 cm, dobimo $\alpha = 53°7'$.
5. rezultat skalarnega produkta je enak $4|\overrightarrow{b}|^2 - 25|\overrightarrow{a}|^2 = \ldots = 0$ in je neodvisen od vmesnega kota.