

m) RADICALI DOPPI - SVOLGIMENTI

$$11) \sqrt{7-2\sqrt{10}} \underset{p=\sqrt{10}}{=} \sqrt{(\sqrt{5}-\sqrt{2})^2} = \boxed{\sqrt{5}-\sqrt{2}}$$

$$12) \sqrt{13+4\sqrt{3}} \underset{p=2\sqrt{3}}{=} \sqrt{(2\sqrt{3}+1)^2} = \boxed{2\sqrt{3}+1}$$

13)

$$\begin{aligned} \sqrt{5-\sqrt{21}} &= \sqrt{\frac{5+\sqrt{25-21}}{2}} - \sqrt{\frac{5-\sqrt{25-21}}{2}} = \sqrt{\frac{5+2}{2}} - \sqrt{\frac{5-2}{2}} = \\ &= \sqrt{\frac{7}{2}} - \sqrt{\frac{3}{2}} = \frac{\sqrt{7}}{\sqrt{2}} - \frac{\sqrt{3}}{\sqrt{2}} = \frac{\sqrt{7}-\sqrt{3}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \boxed{\frac{\sqrt{14}-\sqrt{6}}{2}} \end{aligned}$$

oppure con un artificio:

$$\begin{aligned} \sqrt{5-\sqrt{21}} & \underset{=}{=} \\ & \text{il "candidato" ad essere} \\ & \text{il doppio prodotto} \\ & \text{non ha un moltiplicatore pari;} \\ & \text{allora noi lo facciamo comparire} \\ & = \sqrt{\frac{10-2\sqrt{21}}{2}} \underset{p=\sqrt{21}}{=} \sqrt{\frac{(\sqrt{7}-\sqrt{3})^2}{2}} = \frac{\sqrt{7}-\sqrt{3}}{\sqrt{2}} = \dots = \boxed{\frac{\sqrt{14}-\sqrt{6}}{2}} \end{aligned}$$

$$14) \sqrt{2-2\sqrt{1-t^2}} \underset{p=\sqrt{1-t^2}}{=} \sqrt{(\sqrt{1+t}-\sqrt{1-t})^2} = \boxed{\sqrt{1+t}-\sqrt{1-t}}$$

o con la formula, dopo aver "portato dentro" il 2:

$$\begin{aligned} \sqrt{2-2\sqrt{1-t^2}} &= \sqrt{2-\sqrt{4-4t^2}} = \sqrt{\frac{2+\sqrt{4-(4-4t^2)}}{2}} - \sqrt{\frac{2-\sqrt{4-(4-4t^2)}}{2}} = \\ &= \sqrt{\frac{2+2t}{2}} - \sqrt{\frac{2-2t}{2}} = \boxed{\sqrt{1+t}-\sqrt{1-t}} \end{aligned}$$