Solve the equation $\sqrt{3x+2}+\sqrt{x+3}=\sqrt{1-2x}$. *[Ans: $-2/3$]*

(ii) Given that the area of triangle PQR, as shown in the diagram, is $\left(3\sqrt{48}+2\sqrt{75}-\frac{48}{\sqrt{24}}\right)\text{cm}^2$ and the length of QR is $\left(11-2\sqrt{2}\right)\text{cm}$, calculate the exact shortest distance from P to QR. [3] *(ii) $4\sqrt{3}$ cm]*

(i) Simplify $3\sqrt{48}+2\sqrt{75}-\frac{48}{\sqrt{24}}$. *[Ans: (i) $22\sqrt{3}-4\sqrt{6}$*

Simplify $\left(3-\sqrt{7}\right)^2-\frac{3}{2+\sqrt{7}}+\frac{112}{\sqrt{28}}$, leaving your answer in the form $a+b$. *[Ans: $18+\sqrt{7}$]*