DATE 2024 .12 .29 NO. 三校数150

三校数作109

永中鐘完捌

ex.4 若 $4x^2-2x-3=0$ 两解为 p, q, $p>q$, 求 p^2-q^2

$\Rightarrow x=\frac{2\pm\sqrt{4+48}}{8}=\frac{1}{4}\pm\frac{1}{4}\sqrt{13}$

$\Rightarrow p=\frac{1+\sqrt{13}}{4},\ q=\frac{1-\sqrt{13}}{4}$

$\Rightarrow p^2-q^2=\left(\frac{1}{4}\right)^2+2\cdot\frac{1}{4}\cdot\frac{1}{4}\sqrt{13}+\left(\frac{1}{4}\cdot\sqrt{13}\right)^2+\left(\frac{1}{4}\right)^2-2\cdot\frac{1}{4}\cdot\frac{1}{4}\cdot\sqrt{13}+\left(\frac{1}{4}\cdot\sqrt{13}\right)^2$

$=\frac{1+13+1+13}{16}=\frac{28}{16}=\frac{7}{4}$ #