

$$\begin{aligned}
 X^4 - 2kX^2 + (k-3)^2 &= 0 \\
 X_{1,2}^2 &= \frac{2k \pm \sqrt{4k^2 - 4(k-3)^2}}{2} \\
 &= k \pm \sqrt{k^2 - k^2 + 6k - 64} \\
 &= k \pm \sqrt{6(k-4)} \\
 &= k \pm 4\sqrt{k-4}
 \end{aligned}$$

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$2 \neq k > 4$

$$\begin{aligned}
 \Delta &> 0 \\
 -\frac{b}{a} &> 0 \\
 \frac{c}{a} &> 0
 \end{aligned}$$

$$\begin{array}{cccc}
 a_1 & & a_2 & & a_3 & & a_4 \\
 \hline
 -\sqrt{k+4}\sqrt{k-4} & & -\sqrt{k-4}\sqrt{k-4} & & \sqrt{k-4}\sqrt{k-4} & & \sqrt{k+4}\sqrt{k-4}
 \end{array}$$

$$2a_3 = a_4 + a_2$$

(173)

$$2\sqrt{k-4}\sqrt{k-4} = \sqrt{k+4}\sqrt{k-4} - \sqrt{k-4}\sqrt{k-4}$$

$$3\sqrt{k-4}\sqrt{k-4} = \sqrt{k+4}\sqrt{k-4} \quad |(\)^2$$

$$9k - 36\sqrt{k-4} = k + 4\sqrt{k-4}$$

$$8k = 40\sqrt{k-4} \quad |(\)^2$$

$$64k^2 = 1600k - 6400 \quad | :64$$

$$k^2 - 25k + 100 = 0$$

$$(k-5)(k-20) = 0$$

$$k=5 \quad k=20 //$$

ב) (174) (175) (176)