



PING YI SECONDARY SCHOOL
Perseverance Yields Success

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Class 312

Subject MATHS - practice 26 2a

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$$\begin{aligned} 4a. & (w+3)(w-1)^2 \\ &= (w+3)(w-1)(w-1) \\ &= (w+3)(w^2-w-w+1) \\ &= w(w^2-w-w+1)+3(w^2-w-w+1) \\ &= w^3-2w^2+w+3w^2-6w+3 \\ &= w^3-2w^2+3w^2+w-6w+3 \\ &= w^3+w^2-5w+3 \end{aligned}$$

$$\begin{aligned} 4b. & \left(\frac{1}{2}x+2\right)^2(-1-2x) \\ &= \left(\frac{1}{2}x+2\right)\left(\frac{1}{2}x+2\right)(-1-2x) \\ &= \left(\frac{1}{4}x^2+x+x+4\right)(-1-2x) \\ &= \left(\frac{1}{4}x^2+2x+4\right)(-1-2x) \\ &= -1\left(\frac{1}{4}x^2+2x+4\right)-2x\left(\frac{1}{4}x^2+2x+4\right) \\ &= -\frac{1}{4}x^2-2x-4-\frac{1}{2}x^3-4x^2-8x \\ &= -\frac{1}{2}x^3-\frac{1}{4}x^2-2x-4-4x^2-8x \\ &= -\frac{1}{2}x^3-\frac{17}{4}x^2-10x-4 \\ &= -\frac{1}{2}x^3-4\frac{1}{4}x^2-10x-4 \end{aligned}$$