

Limits

factor + cancel

$$\text{Ex. } \lim_{x \rightarrow 6} \frac{x^2 - 36}{x^2 - x - 30} = \lim_{x \rightarrow 6} \frac{\cancel{(x-6)}(x+6)}{\cancel{(x-6)}(x+5)}$$

$$= \frac{6+6}{6+5} = \frac{12}{11}$$

$$\text{Ex. } \lim_{x \rightarrow 4} \frac{\sqrt{2x+1} - 3}{x-4} \cdot \frac{\sqrt{2x+1} + 3}{\sqrt{2x+1} + 3}$$

$$= \lim_{x \rightarrow 4} \frac{2x+1 - 9}{(x-4)(\sqrt{2x+1} + 3)}$$

$$= \lim_{x \rightarrow 4} \frac{\cancel{2(x-4)}}{\cancel{(x-4)}(\sqrt{2x+1} + 3)} = \frac{2}{\sqrt{2(4)+1} + 3}$$

$$= \frac{2}{6} = \frac{1}{3}$$

HW Set Two # 1-4, 7, 9

Read the sample paper