

$$\text{d) } \lim_{x \rightarrow -\infty} \left(\frac{-5}{2x^3} - 7 + \frac{8}{x} \right)$$

Solution: This limit is -7 since the other two terms approach zero as x approaches negative infinity. Using mathematical notation,

$$\lim_{x \rightarrow -\infty} \frac{-5}{2x^3} - 7 + \frac{8}{x} = \lim_{x \rightarrow -\infty} \frac{-5}{2x^3} + \lim_{x \rightarrow -\infty} -7 + \lim_{x \rightarrow -\infty} \frac{8}{x} = 0 - 7 + 0 = -7$$