

## PRACTICE QUIZ 1

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**Time: 10 min**

**Time to beat: 4 min**

**Problem 1.** If  $\lim_{x \rightarrow -1} f(x) = 2$ ,  $\lim_{x \rightarrow -1} g(x) = 3$ ,  $\lim_{x \rightarrow -1} h(x) = 1$ , then what is  $\lim_{x \rightarrow -1} \frac{f(x)h(x)}{g(x)-f(x)}$ ?

**Problem 2.** Find the limit  $\lim_{x \rightarrow -1} \frac{x^2+3x+2}{x+1}$ .

**Problem 3.** Find the limit  $\lim_{x \rightarrow 1} \frac{x^2-6x+5}{x^3-1}$ .  
(Hint: Use the fact that  $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$ )

**Problem 4.** Find the right-sided limit  $\lim_{x \rightarrow 1^+} \frac{\sqrt{x}-1}{x^2-1}$ .