2.5.13 This is continuous wherever it's defined, but it's undefined when $x - 2 = 0$, so $x = 2$. Therefore the function is continuous whenever

$$x \neq 2.$$

2.5.29 For $x \neq 3$,

$$\frac{x^2 - x - 6}{x - 3} = \frac{(x - 3)(x + 2)}{x - 3} = x + 2;$$

for $x = 3$,

$$5 = 3 + 2 = x + 2$$

also. So in fact, $g(x) = x + 2$ for all x; of course, this g is continuous **for all** x.

2.5.39 Since

$$\frac{x^2 - 9}{x - 3} = \frac{(x - 3)(x + 3)}{x - 3} = x + 3 \underset{x \to 3}{\longrightarrow} 3 + 3 = 6,$$

so define

$$g(3) = 6.$$