

**Exercise 32**

Find the domain of the function.

$$f(x) = \frac{2x^3 - 5}{x^2 + x - 6}$$

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**Solution**

To determine the domain, determine where the denominator blows up.

$$x^2 + x - 6 \neq 0$$

$$(x + 3)(x - 2) \neq 0$$

$$x \neq -3, 2$$

Therefore, the domain is  $\{x \mid x \neq -3, 2\}$ .