

**Question 1** Which of the following are rational functions?

**Select All Correct Answers:**

(a)  $f(x) = 0$  ✓

(b)  $f(x) = \frac{3x + 1}{x^2 - 4x + 5}$  ✓

(c)  $f(x) = e^x$

(d)  $f(x) = \frac{\sin(x)}{\cos(x)}$

(e)  $f(x) = -4x^{-3} + 5x^{-1} + 7 - 18x^2$  ✓

(f)  $f(x) = x^{1/2} - x + 8$

(g)  $f(x) = \frac{\sqrt{x}}{x^3 - x}$

**Feedback (attempt):** All polynomials can be thought of as rational functions.

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