

Name: _____

Date: _____

Math 1050 PRACTICE Quiz (5.1-5.3)

For problems 1 to 3, consider the function $f(x) = \frac{3x-7}{x^2-3x+2}$

1. The domain of the function $f(x)$ is _____
2. The x – *intercept(s)* of $f(x)$ is (are) _____ (write answer(s) as an ordered pair(s))
3. The y – *intercept(s)* of $f(x)$ is (are) _____ (write answer(s) as an ordered pair(s))

For problems 4 to 5, consider the function $g(x) = \frac{x^2+4x+7}{x-1}$. Write your answer(s) in equation form.

4. The vertical asymptote(s), if any, of the function $g(x)$ is (are) _____
5. The non-vertical asymptote(s), if any, of the function $g(x)$ is (are) _____

6. If $x = -5$ is a zero (root) of a polynomial $P(x)$ then _____ is a factor of $P(x)$.

7. Consider the rational function $f(x) = \frac{x-4}{x^2-9}$.

a) State the domain of $f(x)$ in interval notation.

b) Find the intercepts of $f(x)$, if any. Write the answer as an ordered pair.

c) Find all asymptotes of $f(x)$. Write the answer as an equation.

d) Determine whether the graph crosses a non-vertical asymptote.

e) Use the above information and other appropriate points to draw its graph. Your graph should clearly show and label all x and y -intercepts (if applicable) and asymptotes.

