MAT 012   **Take-Home Quiz 4**   **Name:** _____

Due: see webpage   Section: _____
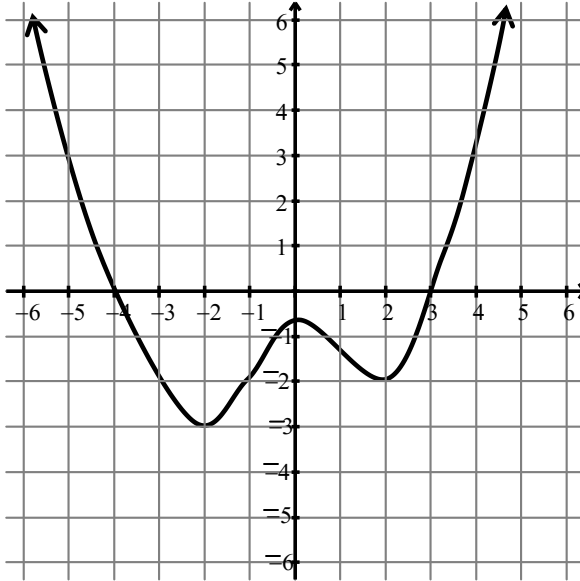
1. For the graph of f(x) below, give the following:

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a) The function's domain

b) The function's range

c)   Give f(–5) =

d) Give <u>all</u> x-values for which f(x) = − 2

2. Given: $f(x) = -x^2 - 3x + 8$
   a) Evaluate $f(-5)$

   b) Find and simplify $f(a-2)$.

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OVER ⟶

3. Simplify as much as possible: (Hint: *Don't stop too early: After simplification, factor numerator and denominator and simplify further.*)

$$\frac{\dfrac{1}{3} + \dfrac{1}{x}}{\dfrac{1}{9} - \dfrac{1}{x^2}} =$$

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