

Quiz 1

TQS 211

Name:

Show *all* your work (algebraically or geometrically) for each and simplify. No credit is given without supporting work.

1. [2] Reduce *if* possible:

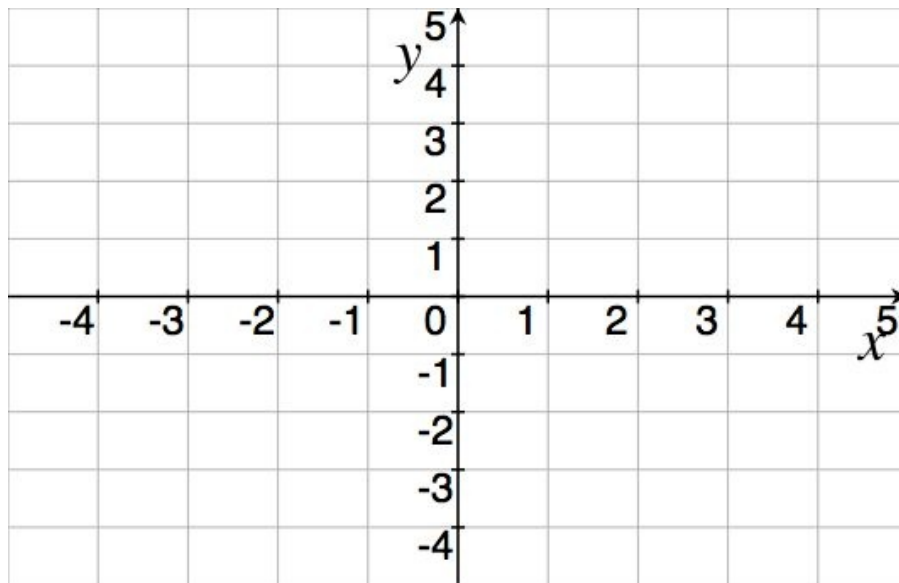
$$\frac{x^2 + 2x}{x^2 + x - 2}$$

$$\frac{1 + TC}{C}$$

2. [2] Solve for t exactly given:

$$0 = 2e^t - 5$$

3. [3] Sketch the graph of $f(x) = \begin{cases} -x - \frac{3}{2} & \text{if } x \leq 0 \\ 3^x & \text{if } x > 0 \end{cases}$



4. [3] Let $f(x) = \ln x$ and $g(x) = x^2 + 1$. Find the following:

$$f(e^2)$$

$$f(g(0))$$

$$g(t + h)$$