

MATH 114 QUIZ 1
13 SEPTEMBER 2016

Solve the following two problems. Show all steps in your work.

- (1) Simplify the following expression. Express your answer as a single fraction with no negative exponents.

$$\frac{3^3(r^{-2}s)^{-2}t^{-3}}{6^2s^{-1}r^5}$$

- (2) Use polynomial long division to divide $y^3 - 4y^2 - 3$ by $-y + 5$. Check your work by verifying that $y^3 - 4y^2 - 3$ really is equal to

$$(\text{quotient}) \cdot (-y + 5) + (\text{remainder}).$$