Handout 1: Inverse, Schimverses - Answers

1. What is the inverse operation of division?

   Multiplication

2. What is the inverse function of $z = 40x + 1$?

   $z = \frac{x-1}{40}$

3. What is the inverse function of the set $\{1, 14; 3, 28; 5, 42\}$?

   $y = \frac{1}{7}x - 1$

4. What is the inverse operation of exponentiation?

   Taking the log.

5. Can $x^3 + x + 1$ have an inverse?

   Yes

6. What is the inverse function of $y = 5^{2x+7}$

   $y = \frac{\log_5 x - 7}{2}$

7. Can x^4 have an inverse?

   No.

8. If the horizontal line test passes through two points of a function, does it pass or fail?

   Fail.

9. Can $10x - 4$ have an inverse?

   Yes.

10. What is the inverse function of $y = \ln 2x$?

   $y = \frac{e^y}{2}$