

Xavier University of Louisiana

Study Guide for the Xavier Mathematics Placement Test

6. Solving linear equations and inequalities

Multiple Choice Practice Problems

1 Solve the equation  $9 - 9x = 81$  for  $x$ :

- a.  $x = -10$
- b.  $x = -72$
- c.  $x = -8$
- d.  $x = 72$
- e.  $x = 8$

2 Solve the equation  $\frac{x}{5} - \frac{1}{7} = \frac{1}{35}$  for  $x$ :

- a.  $x = \frac{2}{7}$
- b.  $x = \frac{6}{7}$
- c.  $x = \frac{4}{7}$
- d.  $x = 6$
- e.  $x = 4$

3 Solve the equation  $b + ax = bx - 5a$  for  $x$ :

- a.  $x = \frac{-5a - b}{a + b}$
- b.  $x = \frac{b - 5a}{a - b}$
- c.  $x = \frac{-5a - b}{a - b}$
- d.  $x = \frac{-5a}{b}$
- e.  $x = -5$

4 Solve for  $x$ :  $\frac{x - 5}{x - 1} = \frac{x - 3}{x}$

- a.  $x = -\frac{3}{7}$
- b. No solution

c.  $x = -1$

d.  $x = -3$

e.  $x = -\frac{1}{3}$