



Math Olympiad and Problem Solving Programs
E120 - Honors Algebra Problem Solving
Problem Set 17.2 - Factorization

Name:

Date:

Instruction: Factor and solve the following equations. Show your work.

1. $7x(4x + 5) = 0 \Rightarrow x = 0, -\frac{5}{4}$

2. $(3x - 2)(x + 4) = 0 \Rightarrow x = \frac{2}{3}, -4$

3. $(3x - 2)(x + 1) = 0 \Rightarrow x = -1, \frac{2}{3}$

4. $(4x + 9)(3x + 7) = 0 \Rightarrow x = -\frac{9}{4}, -\frac{7}{3}$

5. $4(x - 1)(3x - 2) = 0 \Rightarrow x = 1, \frac{2}{3}$

6. $6(x - 1)^2 = 0 \Rightarrow x = 1, 1$

7. $(5x - 9)(x - 1) = 0 \Rightarrow x = 1, \frac{9}{5}$

8. $(x - 1)(3x + 2) = 0 \Rightarrow x = 1, -\frac{2}{3}$

9. $(3x - 10)(2x + 3) = 0 \Rightarrow x = \frac{10}{3}, -\frac{3}{2}$

10. $(2x - 5)^2 = 0 \Rightarrow x = \frac{5}{2}, \frac{5}{2}$