

5.5 Imaginary Numbers

Name _____ Hour _____

Simplify the square roots.

1) $\sqrt{-25}$

3) $\sqrt{-24}$

5) $5\sqrt{-16}$

7) $2\sqrt{-300}$

2) $\sqrt{-144}$

4) $\sqrt{-27}$

6) $-3\sqrt{-50}$

8) $\sqrt{-72}$

Solve each equation for x . Leave you answer in simplified radical form.

9) $x^2 = -900$

13) $2x^2 + 32 = 0$

10) $x^2 = -125$

14) $3x^2 + 81 = 0$

11) $x^2 + 9 = 0$

15) $2(x - 1)^2 = -80$

12) $x^2 + 48 = 0$

16) $(x - 4)^2 + 9 = 0$

Simplify the following expressions.

17) $\sqrt{-3}(\sqrt{-9} - \sqrt{12})$

18) $\sqrt{-2}(\sqrt{-16} + \sqrt{-8})$