

## Algebra 1B Homework Check (11-6)

(Please attach homework to this sheet and fill out the questions below.)

Pg. 808: 1-23

1. **Vocabulary** In the expression  $\sqrt{3x - 6} + 7$ , what is the *radicand*?

Simplify each expression.

2.  $\sqrt{81}$

3.  $\sqrt{\frac{98}{2}}$

4.  $\sqrt{(a + 7)^2}$

Simplify. All variables represent nonnegative numbers.

5.  $\sqrt{180}$

6.  $\sqrt{40}$

7.  $\sqrt{648}$

8.  $\sqrt{m^5n^3}$

9.  $\sqrt{32x^4y^3}$

10.  $\sqrt{200a^2b}$

11.  $\sqrt{\frac{17}{25}}$

12.  $\sqrt{\frac{7}{16}}$

13.  $\sqrt{\frac{6}{49}}$

14.  $\sqrt{\frac{b}{c^2}}$

15.  $\sqrt{\frac{4x^2}{36x}}$

16.  $\sqrt{\frac{7a^4}{9a^3}}$

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Hour: \_\_\_\_\_

Simplify. All variables represent nonnegative numbers.

17.  $\sqrt{\frac{108}{49}}$

18.  $\sqrt{\frac{204}{25}}$

19.  $\sqrt{\frac{512}{81}}$

20.  $\sqrt{\frac{1}{36x^2}}$

21.  $\sqrt{\frac{50x^2}{169}}$

22.  $\sqrt{\frac{72x^7}{4x^4}}$

23. **Recreation** Your boat is traveling due north from a dock. Your friend's boat left at the same time from the same dock and is headed due east. After an hour, your friend calls and tells you that he has just stopped because of engine trouble. How far must you travel to meet your friend? Give your answer as a radical expression in simplest form. Then estimate the distance to the nearest mile.

