1. Find the square root.

\[ \sqrt{121} \]

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. The square root is __________.
- B. The square root is not a real number.

2. Simplify.

\[ -\frac{1}{\sqrt{81}} \]

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. \(-\frac{1}{\sqrt{81}} = __________
- B. The root is not a real number.

3. Find the square root.

\[ -\sqrt{100} \]

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. The square root is a real number. \(-\sqrt{100} = __________
- B. The square root is not a real number.

4. Simplify. Assume that variables represent nonnegative real numbers.

\[ \sqrt{x^8} \]

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. \(\sqrt{x^8} = __________
- B. The square root is not a real number.

5. Simplify by factoring. Assume that all variables under radicals represent nonnegative numbers.

\[ \sqrt{49x^6} \]

Select the correct choice below and, if necessary, fill in the answer box that completes your choice.

- A. \(\sqrt{49x^6} = __________
  
  (Type an exact answer, using radicals as needed.)
- B. The square root is not a real number.
\[\sqrt{(-8)^2}\]

Select the correct choice below and, if necessary, fill in the answer box that completes your choice.

- **A.** \(\sqrt{(-8)^2} = \) 
  (Type an exact answer, using radicals as needed.)
- **B.** The square root is not a real number.

7. Simplify. Assume that the variable represents any real number.
\[\sqrt{100x^2}\]

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- **A.** \(\sqrt{100x^2} = \) 
- **B.** The root does not represent a real number.

8. Rationalize the denominator.
\[\frac{\sqrt{10}}{\sqrt{7}}\]
The answer is __________.

9. Rationalize the denominator.
\[\sqrt{\frac{1}{149}}\]
\[\sqrt{\frac{1}{149}} = \) 
(Type an exact answer, using radicals as needed.)

10. Rationalize the denominator. Assume that all variables represent positive real numbers.
\[\sqrt{\frac{121}{x}}\]
\[\sqrt{\frac{121}{x}} = \) 
(Type an exact answer, using radicals as needed.)

11. Rationalize the denominator. Assume that all variables represent positive real numbers.
\[\frac{9}{\sqrt{28x}}\]
\[\frac{9}{\sqrt{28x}} = \) 
(Type an exact answer, using radicals as needed.)
12. Rationalize the denominator of \( \frac{7}{\sqrt{7x}} \). Assume that all variables represent positive real numbers.

\( \frac{7}{\sqrt{7x}} = \) ___________ (Type an exact answer, using radicals as needed.)

13. Rationalize the denominator.

\( \frac{5\sqrt{3}}{\sqrt{2}} \)

\( \frac{5\sqrt{3}}{\sqrt{2}} = \) ___________ (Type an exact answer, using radicals as needed.)

14. Rationalize the denominator.

\( \frac{\sqrt{17x}}{\sqrt{2y}} \)

\( \frac{\sqrt{17x}}{\sqrt{2y}} = \) ___________ (Type an exact answer, using radicals as needed.)

15. Rationalize the denominator. Assume that all variables represent positive real numbers.

\( \frac{\sqrt{3x}}{\sqrt{125}} \)

\( \frac{\sqrt{3x}}{\sqrt{125}} = \) ___________ (Type an exact answer, using radicals as needed.)

16. Rationalize the denominator. Assume that all variables represent positive real numbers.

\( \frac{1}{\sqrt{27z}} \)

\( \frac{1}{\sqrt{27z}} = \) ___________ (Type an exact answer, using radicals as needed.)

17. Rationalize the denominator.

\( \frac{6}{1 - \sqrt{3}} \)

\( \frac{6}{1 - \sqrt{3}} = \) ___________ (Simplify your answer. Type an exact answer, using radicals as needed.)
18. Rationalize the denominator.

\[
\frac{\sqrt{14} - \sqrt{13}}{\sqrt{14} + \sqrt{13}}
\]

\[
\frac{\sqrt{14} - \sqrt{13}}{\sqrt{14} + \sqrt{13}} = \text{___________} \quad \text{(Type an exact answer, using radicals as needed.)}
\]