

Simplify.

1) $\sqrt{72}$

2) $\sqrt{-121}$

3) $\sqrt{-63}$

4) $\sqrt{96}$

5) $\sqrt{100x^2y^6}$

6) $\sqrt{-9w^4}$

7) $\sqrt{44n^{10}}$

8) $\sqrt{-75r^3}$

Multiply or divide the radicals. Put answers in simplest form.

9) $\frac{\sqrt{18}}{\sqrt{2}}$

10) $(2\sqrt{8})(-5\sqrt{5})$

11) $\sqrt{\frac{7}{25}}$

12) $\sqrt{-12} \cdot \sqrt{-10}$

13) $8\sqrt{-16} \cdot 3\sqrt{45}$

14) $\sqrt{18n^3} \cdot \sqrt{22n}$

Simplify the "pure" imaginary number problems.

15) $-3i^3 \cdot 6i$

16) i^{31}

17) $(4i)(11i^3)(2i^2)$

18) i^{60}