

Imaginary Numbers (Assignment 14)

Simplify.

1. $\sqrt{-16}$

2. $\sqrt{-28}$

3. $\sqrt{-5}$

4. $\sqrt{-10} \cdot \sqrt{-2}$

5. $\frac{\sqrt{-80}}{\sqrt{-10}}$

6. $\frac{21\sqrt{-6}}{7\sqrt{-2}}$

7. $(3\sqrt{-5})^2$

8. $(6\sqrt{-8})^2$

9. $2\sqrt{-50}$

10. $\sqrt{64 - 100}$

11. $\sqrt{-32}$

12. $-4\sqrt{-40}$

13. $-2\sqrt{-4}$

14. $\sqrt{-5} \cdot \sqrt{5}$

15. $\frac{2\sqrt{-18}}{\sqrt{-2}}$

16. $\frac{\sqrt{-6} \cdot \sqrt{12}}{\sqrt{2}}$

17. $\sqrt{-\frac{1}{4}}$

18. $-2\sqrt{-9}$

Simplify.

1. i^7

2. i^{12}

3. i^{10}

4. i^9

5. i^{21}

6. i^{4005}

7. $3i^{100} - i^{14}$

8. $i^{15} + i^{31}$

9. i^{-18}

10. $-i^{11}$