

Simplify.

1. $\sqrt{-36}$

3. $\pm\sqrt{-49}$

5. $\sqrt{-100}$

7. $\sqrt{-144}$

9. $3\sqrt{-9}$

11. $16 - \sqrt{-16}$

13. $16 - \sqrt{-169}$

15. $3.5 + \sqrt{-1.21}$

17. $157 - \sqrt{-324}$

19. i^3

21. i^9

23. i^{12}

25. $24i^{20}$

2. $\sqrt{-121}$

4. $\sqrt{-81}$

6. $-\sqrt{-16}$

8. $11\sqrt{-81}$

10. $-2\sqrt{-16}$

12. $-24 \pm \sqrt{-9}$

14. $2.6 + \sqrt{-81}$

16. $-48 \pm \sqrt{-256}$

18. $44 - \sqrt{-1}$

20. i^5

22. i^8

24. $8i^{15}$

III. Challenge Problems

Simplify

1. i^{255}

2. i^{1024}

3. For i^x where x is an even number greater than 0 develop a rule to determine if i^x simplified is 1 or -1 .

4. Find the error in the student's work.

$$14 - \sqrt{16}$$

$$14 + \sqrt{16}$$

$$14 + 4$$

$$18$$