

LT 4.1 Review

Simplify. Write your answers here.

Show your work here.

1. _____ $(-\sqrt{-5})(4\sqrt{-8})$

2. _____ $\sqrt{-18} - \sqrt{-200} + \sqrt{-49}$

3. _____ $\frac{2}{7i}$

4. _____ $\frac{1+i}{1-2i}$

5. _____ $(5-i)^2 - (5-i^2)$

6. _____ $\frac{45}{3\sqrt{-3}}$

7. _____ i^{-15}

8. _____ $\frac{3+i\sqrt{4}}{7-\sqrt{-3}}$

9. _____ $(\sqrt{5} + 8i\sqrt{2})(4\sqrt{3} - i\sqrt{2})$

10. _____ $(9+i)(5-3i)$

11. _____ $(-11+8i) - (-4-8i)$

12. _____ $\frac{i-6}{i}$

13. _____ $(-2i)(-8i^5)(2i)$

14. _____ $i^{18} + i^{17} + i^{16}$

15. _____ $\frac{5}{i+2} + \frac{1}{i}$

16. _____ $(2+3\sqrt{-3})^2$

17. _____ $\frac{(i^8)^2 i}{i^5 (i^2)^6}$

18. _____ $\left(\frac{1}{3} + \frac{2i\sqrt{3}}{3}\right)^2$

19. _____ $\sqrt{-6}(2\sqrt{3} - \sqrt{-10})$

Solve using the quadratic formula.

20. _____ $x^2 - 10x - 11 = 0$

21. _____ $x^2 + 6x - 16 = 0$

22. _____ $2x^2 + 25x + 33 = 0$

23. _____ $x^2 + 8x + 16 = 0$