

Add or subtract. Write each answer in $a + bi$ form.

1. $(5 - 2i) + (9 - 7i) =$

2. $(-3 + 4i) + (6 + i) =$

3. $(3 - 8i) - (4 - 2i) =$

4. $(1 - 5i) - (-2 - 8i) =$

Multiply. Write each answer in $a + bi$ form.

5. $(5 + 3i)(4 - 6i) =$

6. $(8 - 2i)(7 + 3i) =$

7. $(4 + 2i)(5 + i) =$

8. $(9 - i)(3 - 2i) =$

Simplify. Write each answer in $a + bi$ form.

9. $i^{71} =$

10. $i^{22} =$

11. $i^{81} =$

12. $i^{100} =$

13. $\frac{12 - 5i}{i} =$

14. $\frac{7 + 2i}{3i} =$

15. $\frac{4 - 3i}{5i} =$

16. $\frac{6 - i}{8 + 2i} =$

17. $\frac{9 + 2i}{2 - i} =$

18. $\frac{6 - 2i}{4 + 3i} =$

Solve each quadratic inequality algebraically.

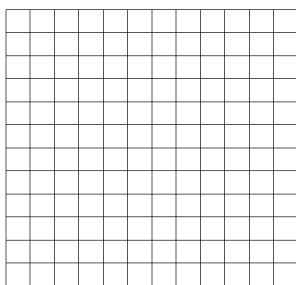
19. $x^2 - 3x - 10 < 0$

20. $x^2 + 3x \geq 18$

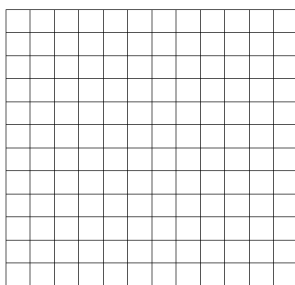
21. $2x^2 + 5x \leq 12$

Graph each quadratic inequality.

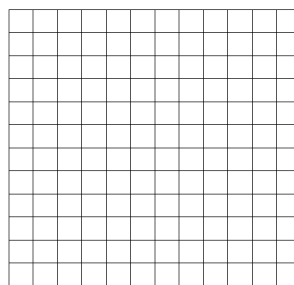
22. $y > x^2$



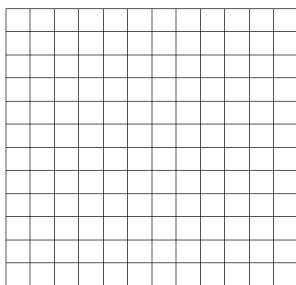
23. $y \leq 2x^2 - 1$



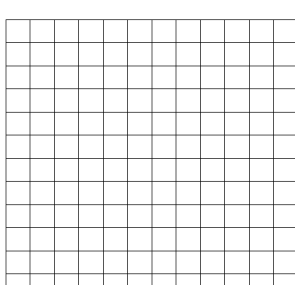
24. $y \geq x^2$



25. $0 > 2x^2 - 6x - 20$



26. $y \geq -x^2 + 4$



27. $y \leq x^2 + 2$

