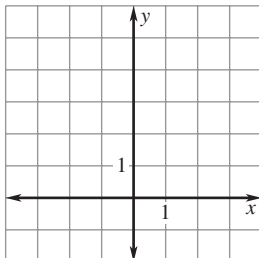


Chapter Test C

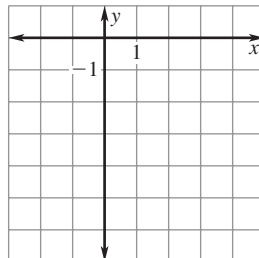
For use after Chapter 5

Graph the quadratic function.

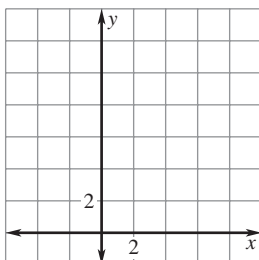
1. $y = x^2 + 1$



2. $y = x^2 - 2x - 5$



3. $y = (x - 2)^2 + 4$

**Solve the quadratic equation by factoring.**

4. $4x^2 - 25 = 0$

5. $-9x^2 + 12x - 4 = 0$

6. $6 = x^2 - x$

Solve the quadratic equation using any appropriate method.

7. $5x^2 = 100$

8. $3(x + 1)^2 + 4 = 22$

9. $\frac{x^2}{10} - \frac{x}{5} + 2 = 0$

Simplify the expression.

10. $i + 3 + \sqrt{-4}$

11. $(-5 - 8i) - (-4 - 8i)$

12. $\frac{2 + i}{2 - i}$

Solve the equation.

13. $2x^2 + 1 = -15$

14. $\frac{1}{4}x^2 + 1 = 33$

Find the absolute value of the complex number.

15. $-8 + i$

16. $\sqrt{5} + i\sqrt{5}$

Solve the equation by completing the square.

17. $x^2 - 2x + 10 = 0$

18. $2x^2 = -9x + 3$

Answers

1. Use grid at left.

2. Use grid at left.

3. Use grid at left.

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

Chapter Test C

For use after Chapter 5

Use the quadratic formula to solve the equation.

19. $x^2 - 3x = -5$

20. $2x^2 - 8x = -16$

Find the discriminant of the equation and give the number and type of solutions of the equation.

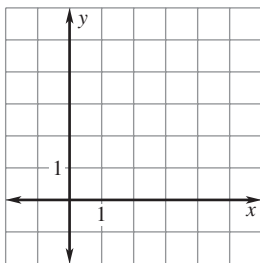
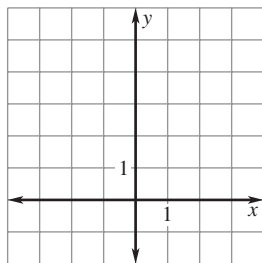
21. $6x^2 = 4 - 5x$

22. $2y^2 - 3y = -4$

Graph the quadratic inequality.

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

24. $y \geq x^2 - 5x + 6$



25. **Vertical Motion** An object is released into the air at an initial height of 9 feet and an initial velocity of 30 feet per second. The object is caught at a height of 10 feet. Use the vertical motion model,

$$h = -16t^2 + vt + s,$$

where h is the height, t is the time in motion, s is the initial height, and v is the initial velocity, to find how long the object is in motion.

19. _____

20. _____

21. _____

22. _____

23. Use grid at left. _____

24. Use grid at left. _____

25. _____