

Review #2 answers

1. 1

2. $\frac{7}{5}$

3. point-slope form: $(y + 1) = -\frac{2}{3}(x - 2)$

Standard form: $2x + 3y = 1$

Point-slope form: $y = -\frac{2}{3}x + \frac{1}{3}$

4. $(y - 2) = \frac{3}{2}(x - 3)$ OR

$$(y + 4) = \frac{3}{2}(x + 1)$$

5. $(y - 4) = 0(x + 2)$

6. $y = \frac{3}{4}x - \frac{7}{4}$

7. $y = -\frac{2}{5}x - \frac{11}{5}$

8. $y = \frac{5}{2}x - 8$

9a. $y = 1.6x - 2686$

9b. $y = 508$

9c. 523.6

11. $x = \frac{5}{2}$

12. $x = -\frac{9}{5}$

13. $y = 3$

14. $x = \frac{\pm\sqrt{7}+1}{3}$

15. $x = \frac{\pm 2\sqrt{7}+4}{2}$

16. $x = \frac{-3}{2}, 0$

17. $x = 9$ or $x = -9$

18. $x = \frac{1}{2}$ or $x = -1$

19. $x = 1 \pm i\sqrt{3}$

20. $x = \frac{7}{2}$

21. $x \leq -3$

22. $x \leq -\frac{19}{5}$ or $-3\frac{4}{5}$ or -3.8

23. $x < -\frac{5}{3}$

24. $x \leq 13.5$ or $\frac{27}{2}$

25. $-6 < x \leq 3$

26. $\frac{1}{3} < x < 3$

27. $x < 6$ or $x > -1$

28. $x \geq 3$ or $x \leq -17$

29. $1 + 3i$

30. $2 - 5i$

31. $-14 + 32i$

32. $-3 - 4i$

33. $4i$

34. $6i\sqrt{2}$

35. $15i\sqrt{2}$

36. $\frac{4 \pm 3i\sqrt{2}}{2}$ OR $2 \pm \frac{3i\sqrt{2}}{2}$ OR $2 \pm \frac{3\sqrt{2}}{2}i$

37. $\frac{1 \pm i\sqrt{5}}{2}$ OR $\frac{1}{2} \pm \frac{\sqrt{5}}{2}i$ OR $\frac{1}{2} \pm \frac{i\sqrt{5}}{2}$

38. $\frac{3 \pm 4i}{6}$ OR $\frac{1}{2} \pm \frac{2i}{3}$ OR $\frac{1}{2} \pm \frac{2}{3}i$

39. a) $h(t) = -16t^2 + 320t$

b) .7975

c) $(0,8] \cup [12,20]$

d) $[8,12]$

40. $x = 45,000$ feet