

Answer Key

Challenge: Skills and Applications

1. $y = -\frac{20}{9}x$ 2. $y = -\frac{1}{2}x + \frac{7}{12}$
3. $y = 3x - 3k - 2$ 4. $y = 6x - 17$
5. $y = -\frac{1}{6}x + \frac{3}{2}$ 6. $y = 6x + 20$
7. $y = -\frac{1}{6}x + \frac{23}{3}$ 8. $y = 0.625x - 2.75$, or
 $y = \frac{5}{8}x - \frac{11}{4}$ 9. about 24 days 10. 9.75 in.
11. -2.75 inches; *Sample answers:* One possibility is that the seed is planted $2\frac{3}{4}$ in. below ground so it starts off with a height of $-2\frac{3}{4}$ in. Another possibility is that the linear growth model in Exercise 8 is not appropriate until the plant has reached a certain stage of growth. Extending the line to the left results in a negative value for $x = 0$, but the values obtained from the model may not reflect the real-life situation for the first few days.