

2. 14 and 41
3. N/A
4. 800 m/h and 600 m/h
5.  $\approx 42\%$

### **SECTIONS 3.1–3.7 EXERCISES: ANSWER KEY**

1.
  - a.  $x = -1, x = \pm 2$
  - b.  $x = -\frac{2}{3}, x = \pm \frac{1}{2\sqrt{2}}$
  - c.  $x = -1$
2.  $Q(x) = 30x^3 - 61x^2 - 119x + 126, R(x) = -120$
3.  $a = -3$
4.  $x = 2, x = \frac{-1 \pm \sqrt{19}}{3}$
5.
  - a.  $x = \pm 2, x = -\frac{1}{2}, x = -\frac{2}{3}$
  - b.  $x = -2, x = 4, x = -5$
  - c.  $x = \pm 1$
6.  $b = 7, c = 12$
7.
  - a.  $x = 1, x = -2$
  - b.  $x = -2, x = -6, x = -4 \pm \sqrt{6}$
8. N/A

### **SECTION 3.8 EXERCISES: ANSWER KEY**

1.
  - a.  $\bar{z} = 4 + 13i, |z| = \sqrt{185}$
  - b.  $\bar{z} = 2i, |z| = 2$
  - c.  $\bar{z} = -\frac{14}{29} - \frac{52}{29}i, |z| = \frac{10\sqrt{29}}{29}$
2.
  - a.  $2 + 2i$