

# Ch. 6 Big Review Answers

① Case 1      Case 2

$$\begin{aligned} B &= 31.2^\circ \\ C &= 133.8^\circ \\ c &= 13.9 \end{aligned}$$

$$\begin{aligned} B &= 148.8^\circ \\ C &= 16.2^\circ \\ c &= 5.4 \end{aligned}$$

② Area = 4,372.5 km<sup>2</sup>

③  $C = 92.9^\circ$   
 $B = 48.5^\circ$   
 $A = 38.6^\circ$

④ 12.6 Ft x 4.3 Ft

⑤ Area = 511.7 units<sup>2</sup>

⑥ 4.8 miles apart

⑦ Total: 28.1 miles

⑧  $\langle 7, -5 \rangle$

⑨  $v = \langle -4, 4\sqrt{3} \rangle$

⑩  $\frac{5\sqrt{29}}{29}i - \frac{2\sqrt{29}}{29}j$

⑪  $9i - 8j$

⑫  $u \cdot v = -59$

⑬  $V(u \cdot 10v) = \langle 4720, 2950 \rangle$

⑭  $\|v\| = 2\sqrt{13}, \theta = 303.7^\circ$

⑮  $\theta = 160.5^\circ$

⑯  $\theta = 36.9^\circ$

⑰  $u \cdot v = 0$ , orthogonal

⑱  $|z| = 3\sqrt{10}$

⑲  $z = 2(\cos 150^\circ + i \sin 150^\circ)$   
 OR  $\frac{5\pi}{6}$

⑳  $z = 2\sqrt{2}(\cos 315^\circ + i \sin 315^\circ)$   
 OR  $\frac{7\pi}{4}$

㉑  $-3\sqrt{3} + 3i$

㉒  $-2 - 2\sqrt{3}i$