Complete each of the following for the three graphs in 1-3 below.

(a) Draw the three graphs.

(b) Find the two that are isomorphic and show they are isomorphic by exhibiting an isomorphism.

(c) Use a graph theoretic property to show that the third graph is not isomorphic to the other two.

1. $V_1 = \{1, 2, 3, 4, 5, 6\}$, $E_1 = \{\{1, 2\}, \{1, 5\}, \{1, 6\}, \{2, 3\}, \{2, 5\}, \{3, 4\}, \{4, 5\}\}$

   $V_2 = \{a, b, c, d, e, f\}$, $E_2 = \{\{a, e\}, \{a, f\}, \{b, d\}, \{b, e\}, \{b, f\}, \{c, d\}, \{d, f\}\}$

   $V_3 = \{u, v, w, x, y, z\}$, $E_3 = \{\{u, v\}, \{u, y\}, \{v, w\}, \{w, x\}, \{w, z\}, \{x, y\}\}$

2. $V_4 = \{1, 2, 3, 4, 5\}$, $E_4 = \{\{1, 2\}, \{1, 3\}, \{1, 4\}, \{1, 5\}, \{2, 4\}, \{2, 5\}, \{3, 4\}, \{3, 5\}\}$

   $V_5 = \{a, b, c, d, e\}$, $E_5 = \{\{a, b\}, \{a, c\}, \{b, c\}, \{b, d\}, \{b, e\}, \{c, d\}, \{c, e\}, \{d, e\}\}$

   $V_6 = \{v, w, x, y, z\}$, $E_6 = \{\{v, w\}, \{v, x\}, \{v, y\}, \{v, z\}, \{w, x\}, \{w, z\}, \{x, y\}, \{y, z\}\}$

3. $V_7 = \{1, 2, 3, 4, 5, 6\}$, $E_7 = \{\{1, 2\}, \{1, 4\}, \{1, 5\}, \{2, 3\}, \{3, 4\}, \{3, 6\}, \{5, 6\}\}$

   $V_8 = \{a, b, c, d, e, f\}$, $E_8 = \{\{a, b\}, \{a, f\}, \{b, c\}, \{b, f\}, \{c, d\}, \{c, e\}, \{d, e\}\}$

   $V_9 = \{u, v, w, x, y, z\}$, $E_9 = \{\{u, v\}, \{u, y\}, \{u, w\}, \{v, z\}, \{w, x\}, \{x, y\}, \{x, z\}\}$