**Static Electricity Review Pg. 428 #1-7**

1. (a) Objects may be attracted or repelled by one another.

(b) A charged object induces charge separation in a neutral object, and the charge separation creates an attractive force.

2. Friction can create a charged object by rubbing off electrons from one material to another.

3. (a) Object B is now charged negatively.

(b) We know object B is charged negatively because electric charge is conserved. If one item gains charge, another must lose charge.

(c) The positively charged object A would place higher on the static-electric series.

(d) We know the positively charged object A would place higher on the static-electric series because items that lose electrons and become positively charged are higher on a static-electric series than those that gain electrons and become negatively charged.

4. (a) The electroscope leaves will move apart due to the induced positive charge of the leaves.

(b) The electroscope leaves will return toward their vertical position as electrons from the knob of the electroscope are pushed back to the leaves by induction.

(c) The electroscope leaves will separate further as more electrons from the knob of the electroscope are pushed toward the leaves.

5. (a) To leave an object positively charged using the induction method, ground the object in the presence of the positive charging device, and then remove the device.

(b) To leave an object negatively charged using the induction method, ground the object in the presence of the negative charging device, and then remove the device.

6. Electroscopes can be grounded by hand or by a ground strap.

7. (a) Electrical discharge is the transfer of static charge from one location to another.

(b) Lightning is a real-life