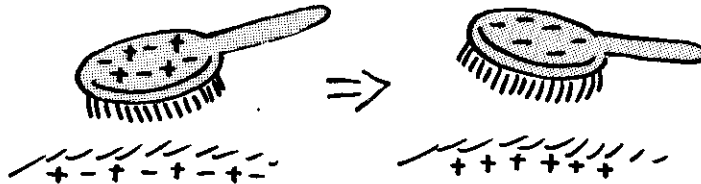


ANSWER: STROKING

The answer is: b. When you stroke a cat, the cat becomes positively charged and the brush becomes negatively charged. In so doing you do not create electricity. The electricity was already there. The cat's fur, before stroking, contained equal amounts of positive and negative electricity in *each* of its atoms, the positive in the nucleus and the negative in the surrounding electrons. The stroking only separated the negative from the positive. This is because the bristles in the brush have a greater affinity for electrons than does the cat's fur. Negatively charged electrons are transferred by friction from the cat's fur to the brush which leaves an imbalance of electric charge on both the fur and the brush. The fur is deficient in negative charge, and we say the fur is



therefore positive. The excess negative charge on the brush makes it negative. So the fur and the brush are equally but oppositely charged. The energy that is expended in the brushing action is stored in the separated charges, which is evident if the brush is brought near the fur and a spark is produced.