4. The manager of a large company that sells pet supplies online wants to increase sales by encouraging repeat purchases. The manager believes that if past customers are offered \$10 off their next purchase, more than 40 percent of them will place an order. To investigate the belief, 90 customers who placed an order in the past year are selected at random. Each of the selected customers is sent an e-mail with a coupon for \$10 off the next purchase if the order is placed within 30 days. Of those who receive the coupon, 38 place an order.

(a) Is there convincing statistical evidence, at the significance level of $\alpha = 0.05$, that the manager's belief is correct? Complete the appropriate inference procedure to support your answer.

GO ON TO THE NEXT PAGE.

(b) Based on your conclusion from part (a), which of the two errors, Type I or Type II, could have been made? Interpret the consequence of the error in context.

GO ON TO THE NEXT PAGE.