class Klass:
    def __init__(self, x):
        self.xcoord = x

    def act_on(self, value):
        self.xcoord += value

k = Klass(4)

Which of the following best describes the code elements above

A. Klass is a class, xcoord an instance variable, act_on a method, k an instance
B. Klass is a class, xcoord a method, act_on an instance variable, k an instance
C. Klass and k are instances, xcoord an instance variable, act_on a method
D. Klass and k are classes, xcoord an instance variable, act_on a method
E. Klass is a class, xcoord and act_on are methods, k is an instance

Answer: A

Klass is a class definition, xcoord is an instance variable and act_on a method of that class, while k is an instance of that class.
class Klass:
    def __init__(self, x):
        self.xcoord = x

    def act_on(self, value):
        self.xcoord += value

k = Klass(4)
k.act_on(2)

After the above code executes, what is the value of \texttt{k.xcoord}?

A. “\texttt{x}”
B. 0
C. 2
D. 4
E. 6

Answer: E

After initialization, the value of \texttt{k.xcoord} is 4. After the \texttt{act_on} method, \texttt{k.xcoord} is incremented by 2 to a final value of 6
After the above code executes, what is the value of `val.x`?

A. 6  
B. 8  
C. 10  
D. 16  
E. 20

Answer: B

After initialization, the value of `val.xcoord` is 4. The `act_on` method in `B` overrides that in `A`, so the final expression is `4 + 2 * 2`