ENDS 231: Practice Quiz 1

*Note: A one page (one sided) crib sheet is allowed during the quiz,
along with a silent, **non-programmable** calculator.*
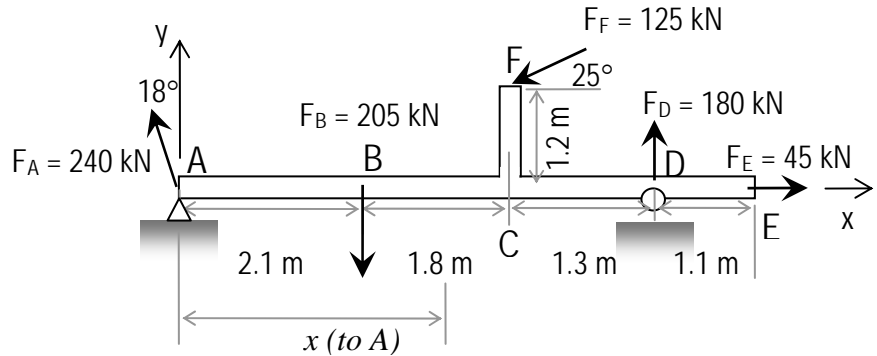
Clearly show your work and answer.

A structure has the coplanar, nonconcurrent force system as shown below.

a) What is the magnitude,
   direction and sense of the
   resultant of the system
   (*size and direction to +x*)?

b) What is the *resultant
   moment* of the force
   system with respect to
   point A [or B or ...]?

c) If it is known that the x component of the resultant force acts along line A-B, what is the
   horizontal location, *x,* of the y component of the resultant force with respect to point A [or B
   or ...]?

d) *[some short question from the text material]*

Answers – Not provided on actual quiz!

a) R = 207.2 kN, θ = 133.4°
b) M@A = +435.4 kN-m (or M@B = 119.5 kN-m)
c) x_A = 2.9 m (or x_B = 0.8 m) [*when R_y = 150.4 kN up*]