

ECE 365 / ME 442 5500 QUIZ 4

NAME:
HONOR CODE:

KEY

[5] 1. WRITE $\frac{V_{out}(s)}{V_{in}(s)}$ FOR FIGURE 1.

[5] 2. WRITE $X(s)/F(s)$ FOR FIGURE 2.

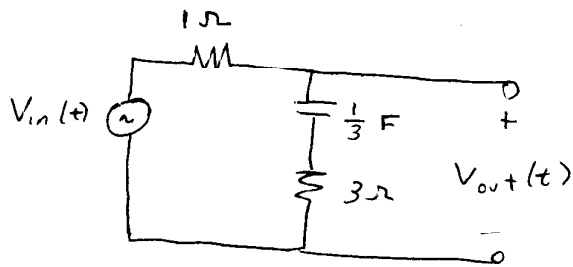


Figure 1

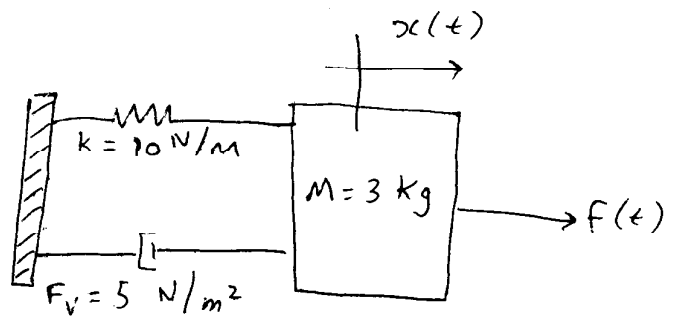
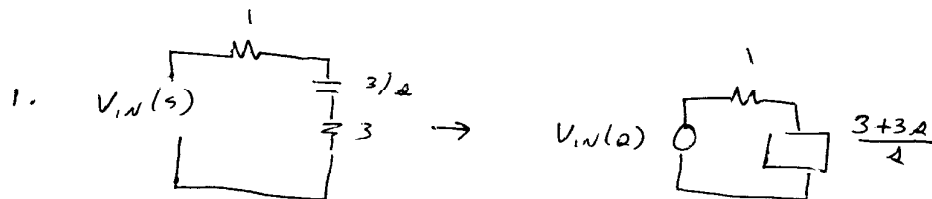
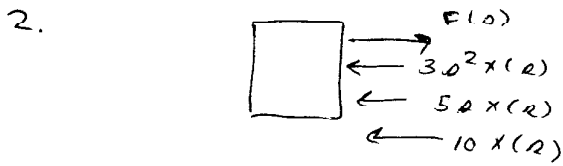


Figure 2



$$\frac{V_{out}}{V_{in}} = \frac{\frac{3+3}{4}}{1 + \frac{3+3}{4}} = \boxed{\frac{3+3}{3+4}}$$



$$F(s) = x(s) [3s^2 + 5s + 10]$$

$$\boxed{\frac{x(s)}{F(s)} = \frac{1}{3s^2 + 5s + 10}}$$