## Exam 1 June 29th, 2021

2.

$$M_{3,2} = \frac{2}{2-1} \left[ \frac{x - \tau_3}{\tau_5 - \tau_3} M_{3,1} + \frac{\tau_5 - x}{\tau_5 - \tau_3} M_{4,1} \right]$$

$$M_{3,1} = \frac{1}{\tau_4 - \tau_3} M_{4,1} = \frac{1}{\tau_5 - \tau_4}$$

$$M_{3,2} = \frac{2}{2-1} \left[ \frac{x-\tau_3}{\tau_5-\tau_3} \frac{1}{\tau_4-\tau_3} + \frac{\tau_5-x}{\tau_5-\tau_3} \frac{1}{\tau_5-\tau_4} \right]$$

$$M_{3,2} = 2 \left[ \frac{x-0}{2-0} \frac{1}{1-0} + \frac{2-x}{2} \frac{1}{2-1} \right]$$

$$M_{3,2} = 2\left[\frac{x}{2} + 1 + \frac{2-x}{2}\right]$$

= 2