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1 using SymPy
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1 using Plots
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$(R_1, R_2, R_3, L, L_1, L_2)$

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1 @syms R1 R2 R3 L L1 L2
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A)

Leq_a =

$$L$$

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1 Leq_a = L
```

Req_a =

$$\frac{R_1 R_3}{R_1 + R_3} + R_2$$

```
1 Req_a = R2 + (R1*R3)/(R1 + R3)
```

tau_a =

$$\frac{L}{\frac{R_1 R_3}{R_1 + R_3} + R_2}$$

```
1 tau_a = Leq_a / Req_a
```

B)

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1 md"### B)"
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Leq_b =

$$\frac{L_1 L_2}{L_1 + L_2}$$

```
1 Leq_b = (L1*L2)/(L1 + L2)
```

Req_b =

$$\frac{R_1 R_2}{R_1 + R_2} + R_3$$

```
1 Req_b = R3 + (R1*R2)/(R1 + R2)
```

tau_b =

$$\frac{L_1 L_2}{(L_1 + L_2) \left(\frac{R_1 R_2}{R_1 + R_2} + R_3 \right)}$$

1 tau_b = Leq_b / Req_b