

# Quarter Car Model

## simulation 1:

### components:

- zero force source
- mass(two port)
- connector
- spring
- damper
- connector
- mass(two port)
- springdamper
- xycl01
- piecewise linear signal component

### values:

#### mass 1:

$m = 300$

$\theta = -90$

#### spring:

springrate = 15 000

spring force = 3220

#### damper:

no change

#### mass 2:

$m = 30$

$\theta = -90$

**springdamper:**

spring rate = 180 000

damper rating = 0

**xvlc01:**

no change

**piecewise linear signal:**

stages = 2

dur stage 1 = 0.1 s

output start stage 2 = 0.05

output at end of stage 2 = 0.05

dur stage 2 = 1e+06

**simulation:**

- change displacement of mass 1 => body displacement
- displacement of mass 2 => wheel displacement

**visualize:**

- click on mass 1 => drag and drop body displacement to screen
- click on mass 2 => drag and drop wheel displacement into the same graph
- drag signal component to the same graph as well

**simulation 2:****components:****values:****simulation:**