

QUIZ 5 Red, PHY 191 B, Friday, Oct 7, 2016 (15 pts)

[see both sides of sheet!]

**SHOW WORK CLEARLY OTHERWISE ZERO CREDIT!!**

Question 1:

A 2.9 kg wood block is pressed against a vertical wood wall by the 40N force shown in the figure.

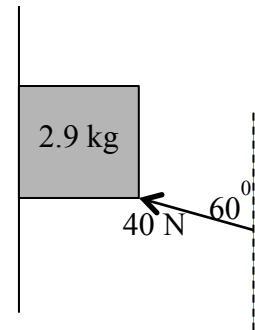
If the block is initially at rest, will

a) the block move upward?

b) the block move downward?

c) the block stay at rest?

The coefficients of static and kinetic friction for wood on wood are 0.2 and 0.1 respectively.



ANSWER: \_\_\_\_\_ (1 pt)

REASONING: \_\_\_\_\_ (6 pts)

TURN SHEET OVER

Question 2:

In the diagram on the right, a block of mass  $m_2 = 2\text{kg}$  is placed on a wedge of mass  $m_1 = 3\text{kg}$ , and a horizontal force  $F = 60\text{N}$  is applied to  $m_1$  as shown. It is observed that  $m_2$  does not slip either up or down along the wedge, as the wedge + block system moves forward.

Find the normal force between the wedge and the block.

