3. The net force in the horizontal direction is the difference between the horizontal pulling force, F_H, and the frictional force, F_f, (we take the difference because the two forces act in opposite directions).

$$F = F_H - F_f$$

$$F = 40\text{ N} - 8\text{ N} = 32\text{ N}$$

Now that we have the net force, Newton's Second Law is used to calculate the acceleration. We use the same approach as was used for problem 1.

$$F = m\,a$$

$$a = F / m$$

$$a = 32\text{ N} / (5\text{ kg})$$

$$a = 6.4\text{ m} / \text{s}^2$$

From the initial statement of the problem we know that the upward force of the table is equal to the weight of the block, because there was no motion in the vertical direction, so the acceleration is $6.4\text{ m} / \text{s}^2$ in the direction of the horizontal pulling force.