5. The weight of the object is found from the product of mass times the acceleration due to gravity

$$W = m\,g$$

$$W = (30\ \text{kg})\,(9.8\ \text{m}/\text{s}^2) = 294\ \text{N}$$

The net force is the difference between the weight (directed downward) and the force due to air resistance (directed upward).

$$F = W - F_R$$

$$F = 294\ \text{N} - 50\ \text{N}$$

$$F = 244\ \text{N}$$

The acceleration is calculated from the net force using Newton's Second Law as in previous problems as

$$a = F / m$$

$$a = (244\ \text{N}) / (30\ \text{kg}) = 8.13\ \text{m}/\text{s}^2$$