

**CLASS-NAME**  
**CLASS-CODE: HW-NUMBER**

Due on Monday, January 24, 2019

**YOUR-NAME YOUR-NUMBER YOUR-ID**

### Question 1

**What is the airspeed velocity of an unladen swallow?**

While this question leaves out the crucial element of the geographic origin of the swallow, according to Jonathan Corum, an unladen European swallow maintains a cruising airspeed velocity of **11 metres per second**, or **24 miles an hour**. The velocity of the corresponding African swallows requires further research as kinematic data is severely lacking for these species.

### Question 2

**How much wood would a woodchuck chuck if a woodchuck could chuck wood?**

(a) Suppose "chuck" implies throwing.

According to the Associated Press (1988), a New York Fish and Wildlife technician named Richard Thomas calculated the volume of dirt in a typical 25–30 foot (7.6–9.1 m) long woodchuck burrow and had determined that if the woodchuck had moved an equivalent volume of wood, it could move "about **700 pounds (320 kg)** on a good day, with the wind at his back".

(b) Suppose "chuck" implies vomiting.

A woodchuck can ingest  $361.92 \text{ cm}^3$  (22.09 cu in) of wood per day. Assuming immediate expulsion on ingestion with a 5% retainment rate, a woodchuck could chuck  **$343.82 \text{ cm}^3$**  of wood per day.

### Question 3

**Identify the author of Equation 1 below and briefly describe it in English.**

$$P(A|B) = \frac{P(B|A)P(A)}{P(B)} \tag{1}$$

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## BONUS QUESTIONS

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### Question 4

**The table below shows the nutritional consistencies of two sausage types. Explain their relative differences given what you know about daily adult nutritional recommendations.**

<i>Per 50g</i>	Pork	Soy
Energy	760kJ	538kJ
Protein	7.0g	9.3g
Carbohydrate	0.0g	4.9g
Fat	16.8g	9.1g
Sodium	0.4g	0.4g
Fibre	0.0g	1.4g

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