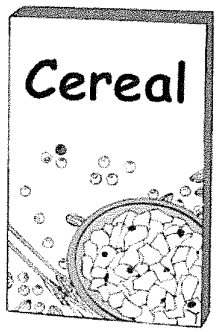
M7 =26 days to go!

6 A machine fills boxes of breakfast cereal.

Each box should weigh 375 g.

Jason takes 100 boxes and tests the accuracy of the machine by weighing them.



Weight (g)	Less than 375	Exactly 375	More than 375
Number of boxes	9	58	33

(a) What is the probability that one of the boxes taken by Jason weighs less than 375 g?

9 out of 100

$\frac{9}{100}$ accept 9% = 0.09

Answer $\frac{9}{100}$ [1]

(b) The machine fills 5000 boxes.

Calculate the number of boxes you would expect to weigh less than 375 g.

9 out of 100 weigh less than 375g

×10 → 90 out of 1000 weigh less

×5 → 450 out of 5000 weigh less

Answer 450 [2]

16 A one gram bag of seed contains half a million seeds.

If each seed weighs the same, calculate the weight, in grams, of one seed.

Give your answer in standard form.

1g is 500000 seeds

$\frac{1g}{500000}$ is 1 seed

Use calculator

$1 \div 500000$

0.000002

2×10^{-6}

Answer 2×10^{-6} g [3]