

# P14- Introducing Sampling Methods

OCR

Edexcel

**26** When a drawing pin is dropped it can land point down or point up.

Created by W Neill

Lucy, Mel and Tom each dropped the drawing pin a number of times.

The table shows the number of times the drawing pin landed point down and the number of times the drawing pin landed point up for each person.

	<b>Lucy</b>	<b>Mel</b>	<b>Tom</b>
<b>point down</b>	31	53	16
<b>point up</b>	14	27	9

Rachael is going to drop the drawing pin once.

- (a) Whose results will give the best estimate for the probability that the drawing pin will land point up?  
Give a reason for your answer.

Stuart is going to drop the drawing pin twice.

- (b) Use all the results in the table to work out an estimate for the probability that the drawing pin will land point up the first time and point down the second time.

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	Lucy	Mel	Tom
point down	31	53	16
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Total  
100  
50  

---

150

⊗  
⊗

Rachael is going to drop the drawing pin once.

- (a) Whose results will give the best estimate for the probability that the drawing pin will land point up?

Give a reason for your answer.

Mel, because she has had most trials

Stuart is going to drop the drawing pin twice.

- (b) Use all the results in the table to work out an estimate for the probability that the drawing pin will land point up the first time and point down the second time.

$$\frac{50}{150} \times \frac{100}{150} = \frac{2}{9} \checkmark$$

AQA

4 Lee wishes to find out if there is a relationship between a person's age and the time it takes them to complete a puzzle.

Lee decides to conduct an experiment.

She asks 12 people to complete the puzzle.

She records each person's age and the time taken to complete the puzzle.

(a) Make one criticism of Lee's method.

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..... [1]

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(a) Make one criticism of Lee's method.

Sample size of 12 is too small ✓

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