

- 2

$n = 60$

$$\Sigma x = 29\,970$$

$$\Sigma x^2 = 14\,970\,300$$

[8]

- 5

- (a)**

This image shows a full page of primary-ruled paper. It features multiple sets of horizontal dashed lines spaced evenly down the page, providing a guide for handwriting practice. The lines are thin and light gray, set against a plain white background. There are no margins, text, or other markings on the page.

- (b)

.....

.....

Lax

- (c)

- (a) Stating a necessary assumption, use a binomial distribution to test the factory owner's claim at the 5% significance level. [6]

[illegible]

- (b) Explain why it would **not** be appropriate to use the Poisson approximation to the binomial distribution to carry out the test in part (a). [1]

3

- (a) Stating a necessary assumption, test at the 2% significance level whether the mean weekly profit has decreased. [6]

[illegible]

Additional page

- If you use the following page to complete the answer to any question, the question number must be clearly shown.

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- If you use the following page to complete the answer to any question, the question number must be clearly shown.

[illegible][illegible]

- 3

$$n = 60$$

$$\Sigma t = 2750$$

$$\Sigma t^2 = 127\,000$$

- [3]

- [5]

- 6

- [1]

- [3]

(c) Calculate an approximate 95% confidence interval for the proportion of students at Florence's college who own a Pumpkin phone. [3]

[illegible]