



NEW ZEALAND QUALIFICATIONS AUTHORITY  
 MANA TOHU MATAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD  
 KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

# 1

COMMON ASSESSMENT TASK

## Level 1 Digital Technologies, 2019

### 91887 Demonstrate understanding of compression coding for a chosen media type

Credits: Three

| Achievement Criteria   |   |  |
|--|---|--|
| Achievement  | Achievement with Merit  | Achievement with Excellence  |
| Demonstrate understanding of compression coding for a chosen media type. | Demonstrate in-depth understanding of compression coding for a chosen media type. | Demonstrate comprehensive understanding of compression coding for a chosen media type. |

Type your School Code and 9-digit National Student Number (NSN) into the header at the top of this page. (If your NSN has 10 digits, omit the leading zero.)

Make sure that you have the scenario page.

**Answer all parts of the assessment task in this document.**

Your answer should be presented in 12pt Arial font, within the expanding text boxes, and may only include information you produce during this examination session.

You should aim to write between **800–1500 words** in total.

**Save your finished work as a PDF file** with the file name used in the header at the top of this page ("SchoolCode-YourNSN-91887.pdf").

By saving your work at the end of the examination, you are declaring that this work is your own. NZQA may sample your work to ensure that this is the case.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

## INSTRUCTIONS

The assessment task in this document relates to compression methods for ONE media type (audio, image or video).

The separate scenario page includes two options for you to choose from.

Read the scenario page and the assessment task before you begin. **All your answers must be based on the same media type** from your chosen option.

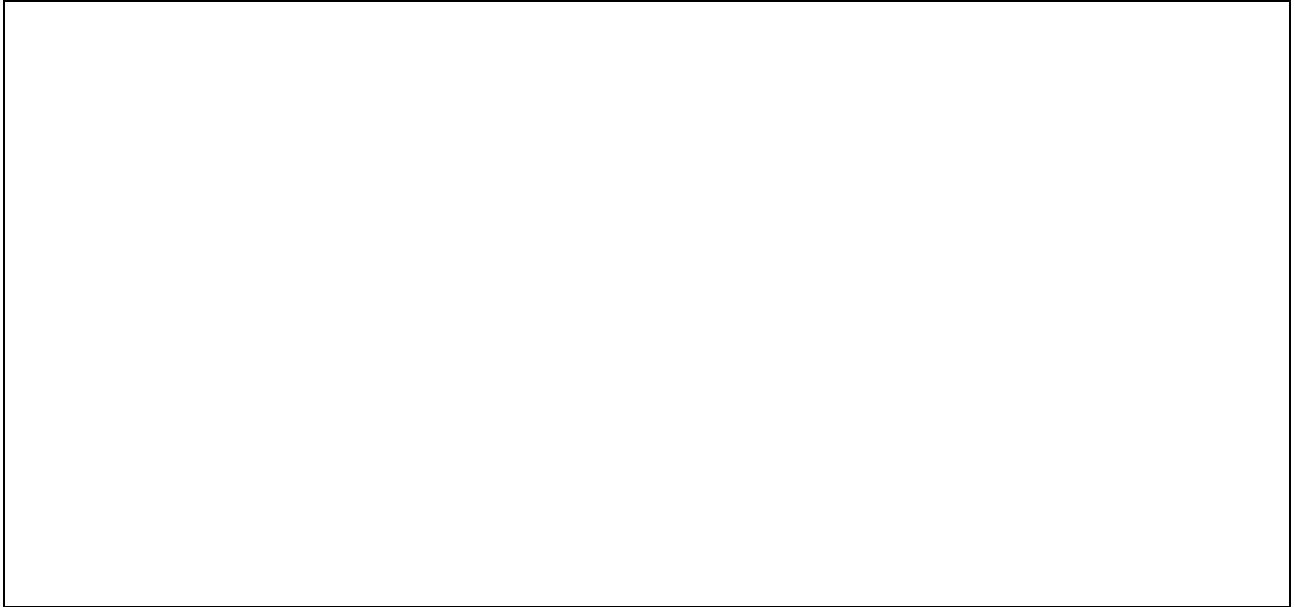
Type the scenario (A, B or C) in the space below:

Type your chosen option from the scenario (audio compression, image compression or video compression) in the space below:

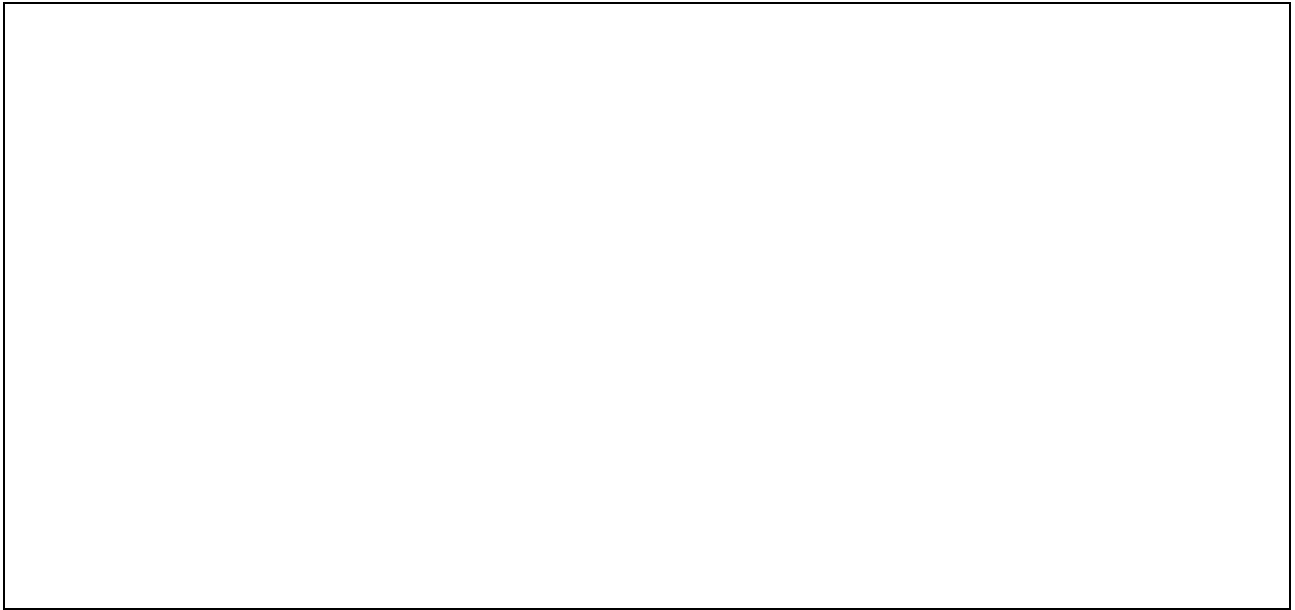
Begin your answers on page 3.

**ASSESSMENT TASK**

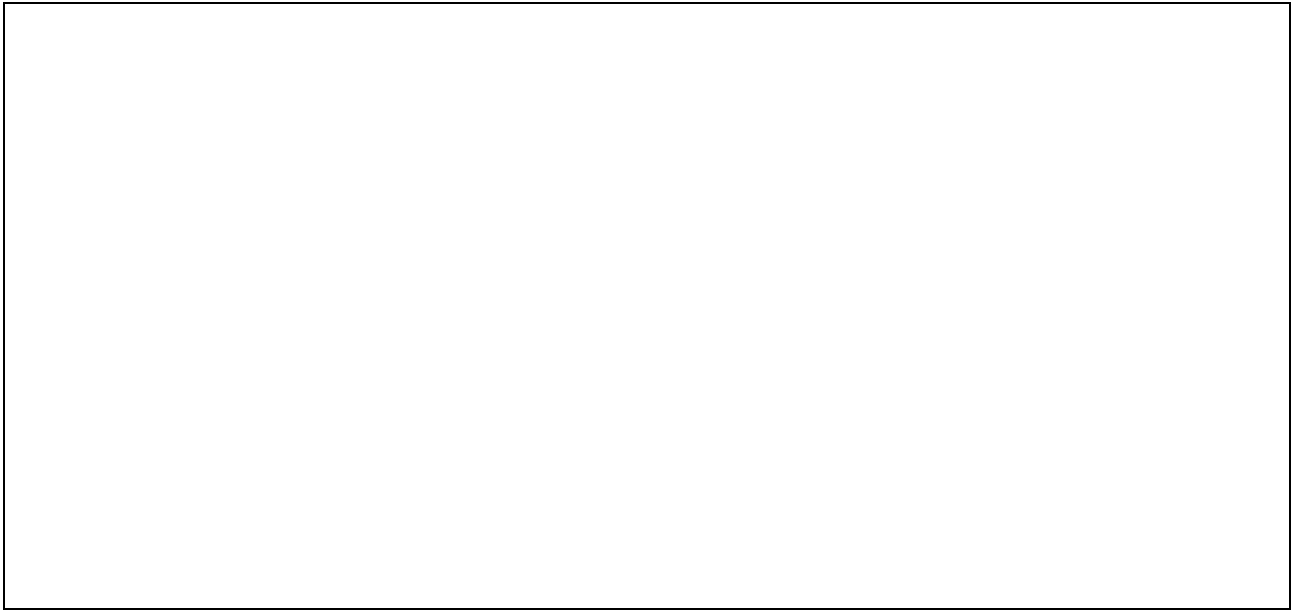
- (a) Explain in detail and justify the format(s) you use for your chosen scenario. Common recording formats include:
- for audio: WAV, MP3, AIFF, WMA
  - for image: RAW and JPEG
  - for video: 1080p, MP4, AVI, WMV.



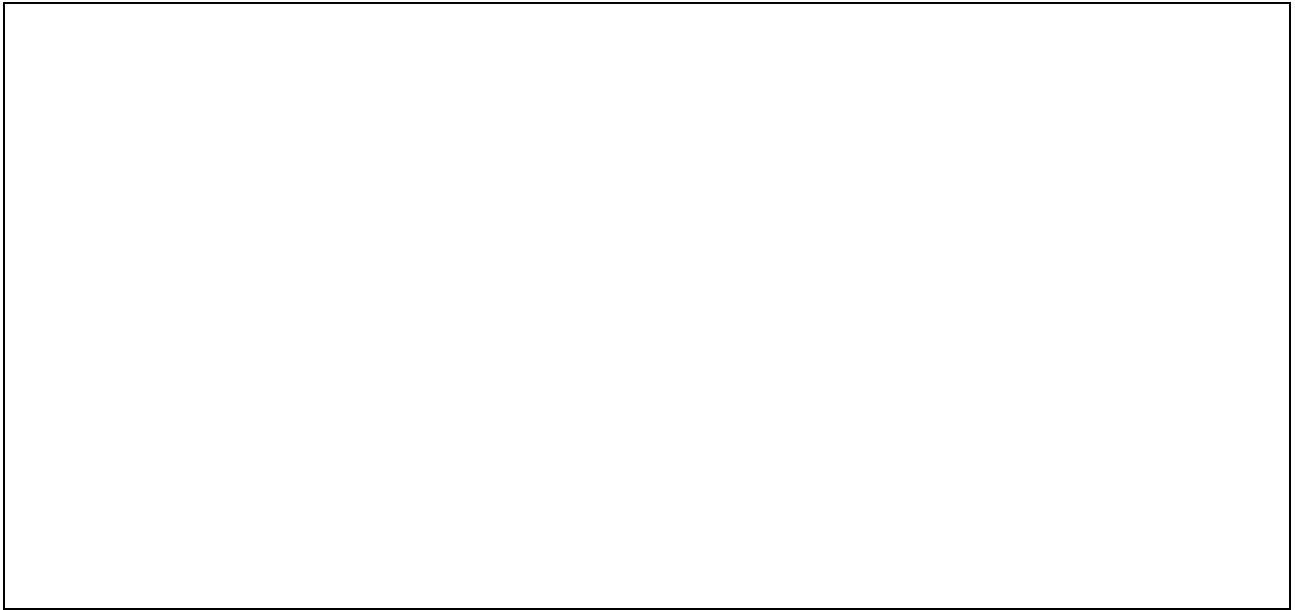
(b) Explain how files of your chosen media type can be represented using bits in an uncompressed form.



(c) Explain the reasons why files of your chosen media type might be compressed.



- (d) Explain how lossy file compression can affect media quality from an end-user's perspective.



- (e) Referring to your chosen option for the scenario, select ONE of the required outputs and type it in the space below:

For this output, identify an appropriate type of compression method (either lossy or lossless), and then:

- explain why you would use lossless or lossy compression, outlining the advantages and disadvantages of compression for the output using this method
- justify your decision, explaining why your chosen compression method would be the most appropriate
- give examples of appropriate file types for the compression method.