



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

COMMON ASSESSMENT TASK

Level 1 Digital Technologies 2021

91887 Demonstrate understanding of compression coding for a chosen media type

Credits: Three

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 space below. (If your NSN has 10 digits, omit the leading zero.) It should look like “123-123456789-91887”.

SchoolCode-YourNSN-91887

Make sure that you have the scenario page.

Answer ALL parts of the assessment task in this document.

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

Your answers should be presented in 12pt Times New Roman font, within the expanding text boxes, and may include only information you produce during this assessment session. Internet access is not permitted.

Save your finished work as a PDF file as instructed by your teacher.

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 this is the case.

INSTRUCTIONS

The task in this assessment requires you to discuss compression methods for ONE media type (image, video, or audio) with reference to the scenario provided.

Read the scenario and all parts of the task before you begin.

All your answers must be based on the same media type.

Scenario (specify “A” or “B”):

Chosen media type (specify “image”, “video”, or “audio”):

ASSESSMENT TASK

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

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

- (ii) Explain how a method of **lossless compression** works for files of your chosen media type.

- (c) (i) Referring to the scenario, select ONE of the required outputs for your chosen media type where a **lossy compression method** would be appropriate, and:
- explain why this method would be more suitable for the output than another compression method
 - explain how this method would affect the output from the end user's perspective.

- (ii) Referring to the scenario, select ONE of the required outputs for your chosen media type where a **lossless compression method** would be appropriate, and explain why it would be more suitable than another method.

- (iii) Referring to the scenario, select ONE of the required outputs for your chosen media type where an **uncompressed storage method** would be appropriate, and explain why it would be more suitable than another method.