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**NZQA**

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COMMON ASSESSMENT TASK

# Level 1 Digital Technologies, 2020

## 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. You may copy and paste (snip and / or screengrab) from the resources pages to support your answers.

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

You may only access the scenarios, resources and Common Assessment Task. Internet access is not permitted**.**

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.

**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 output option (audio, image or video) from the scenario in the space below:

Begin your answers on page 5.

**RESOURCES**

You may copy and paste (snip and / or screengrab) relevant resources from this page and page 4 to support your answers in the assessment task.

Figure 1

Figure 2

Figure 3                                    Figure 4
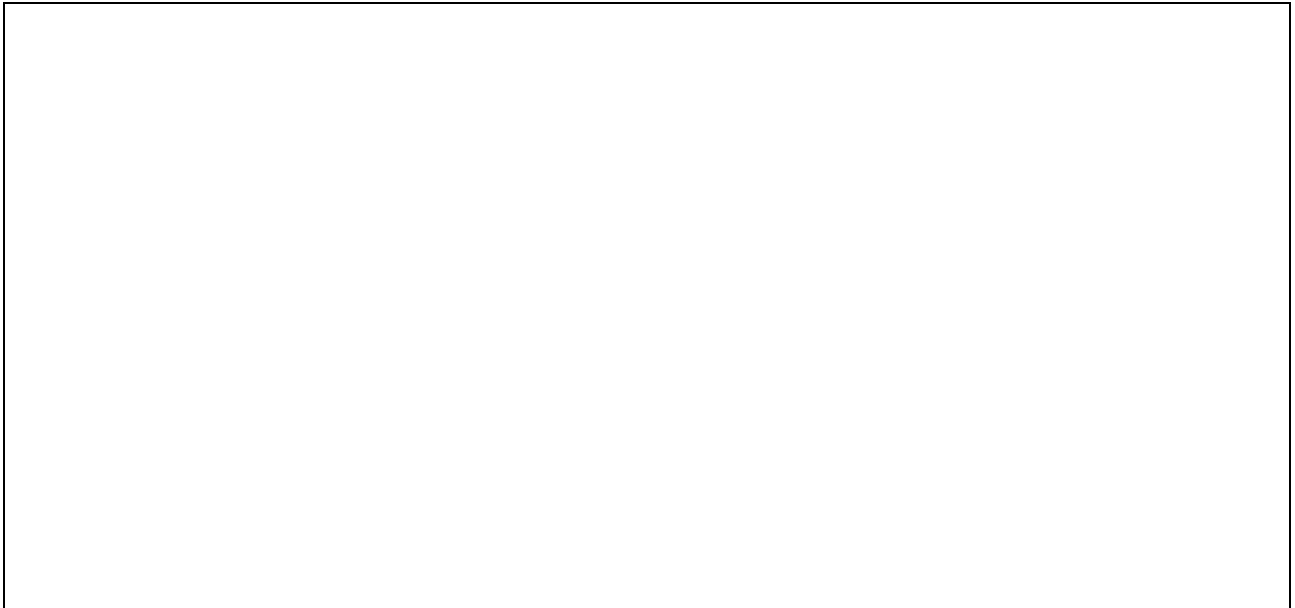
Figure 5

Figure 6

Figure 7

Figure 8

**Acknowledgements**

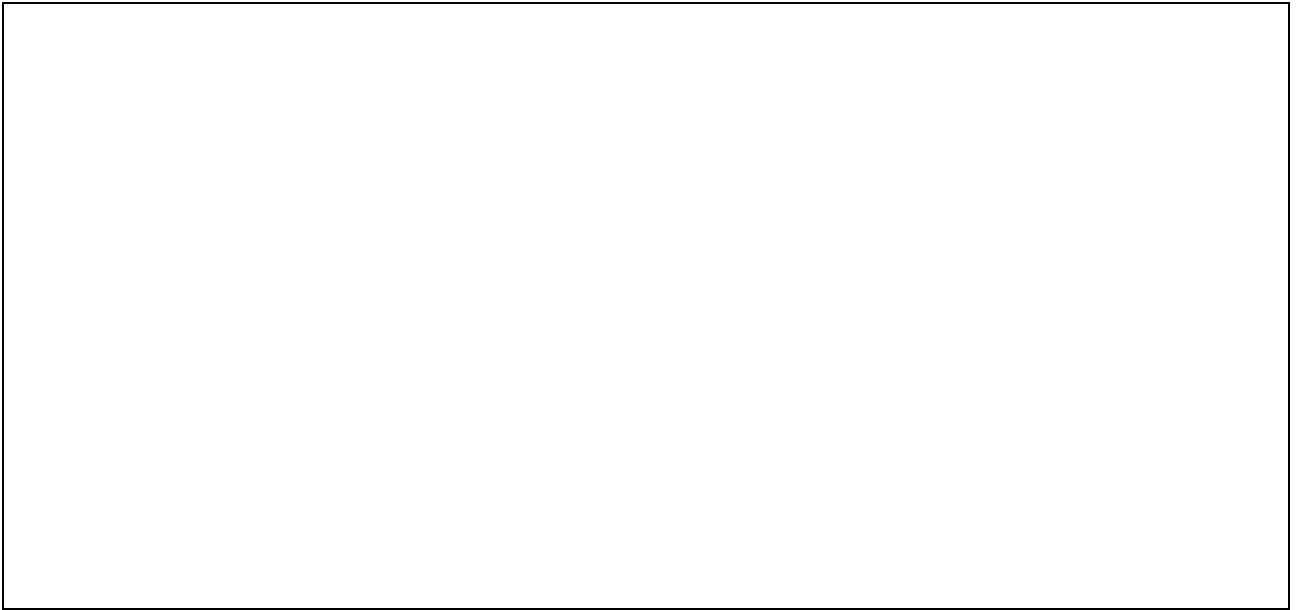Material from the following sources has been adapted for use in this examination:
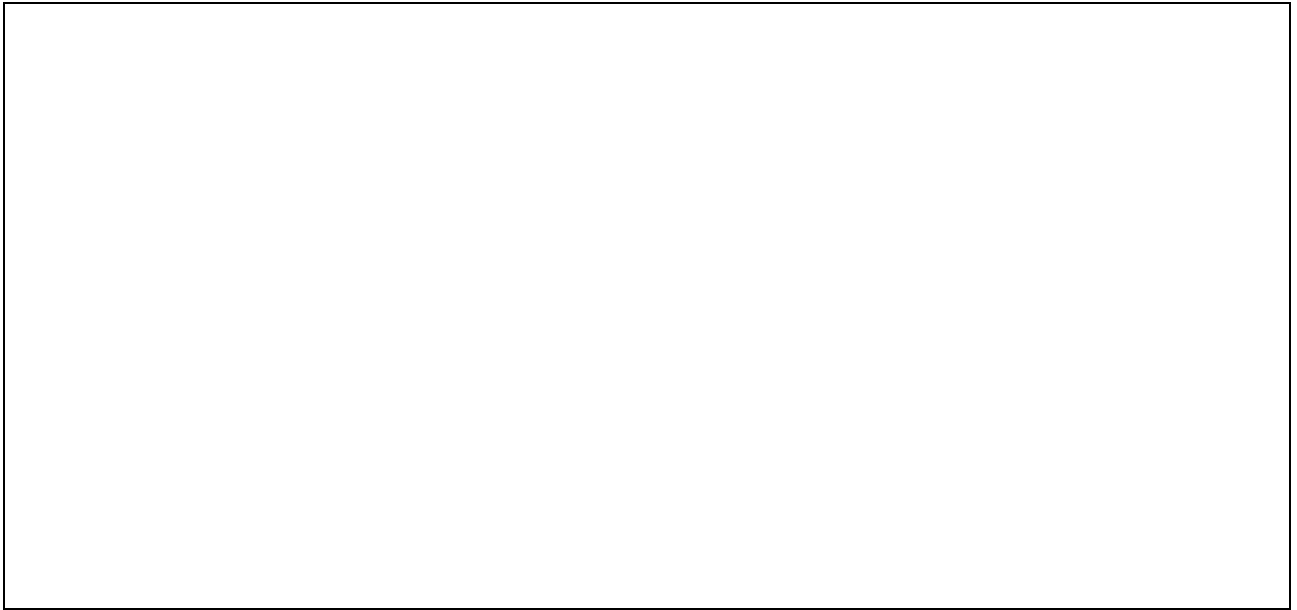
**ASSESSMENT TASK**

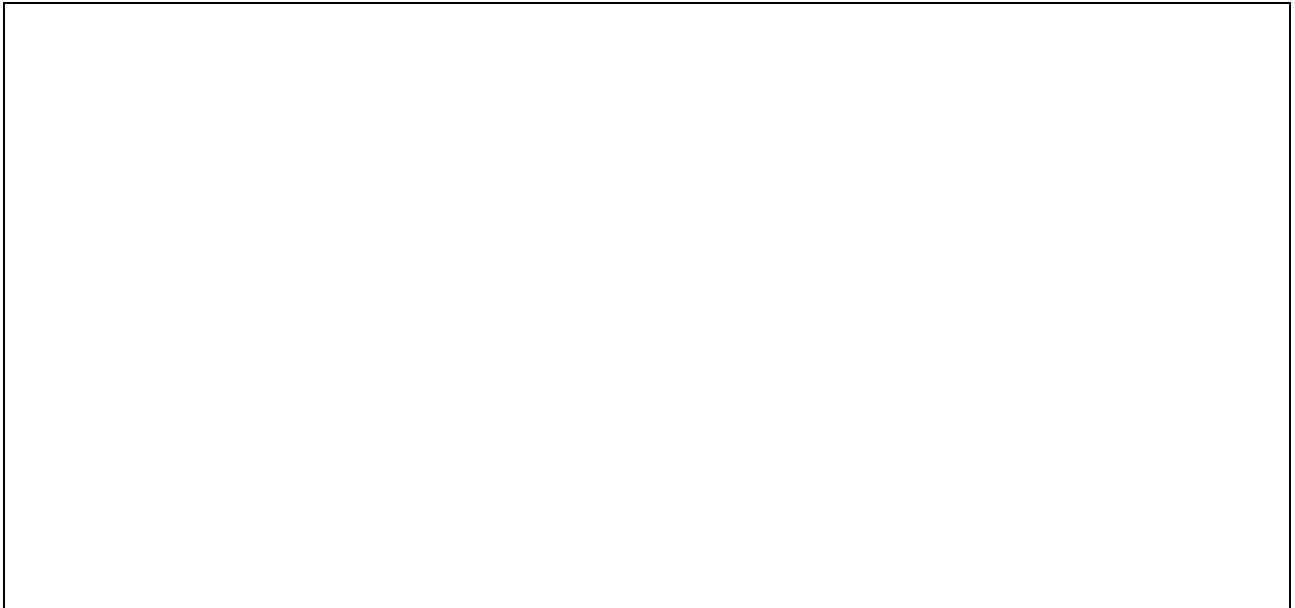(a)   Explain how files of your chosen media type can be represented using bits in an uncompressed form.

(b) Explain why files of your chosen media type might be compressed.

(c)   Explain and evaluate how lossless file compression functions.

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

(e)    Referring to the required outputs of your chosen media type option (Scenario page), evaluate:

- the advantages and disadvantages of using a **lossless** compression method, AND
- the advantages and disadvantages of using a **lossy** compression method, AND
- where **uncompressed** is a better choice than compressed.