

B) Use Paper-Based Maps to Determine Coordinates

Show your calculations, including units, in a neat and orderly fashion to receive marks.

- g) Use the older (NAD 27) Nanaimo map (92 G/4) and determine the **UTM** coordinates (nearest 10 metres) for **Shaft Point on Newcastle Island**.

Zone: 10N Easting: _____ Northing: _____

- h) Use the newer (NAD 83) Nanaimo map (92 G/4) and determine the **UTM** coordinates (nearest 10 metres) for **Shaft Point on Newcastle Island**.

Zone: 10N Easting: _____ Northing: _____

- i) What is the difference (in metres) between the two datums? Show calculations (include a small 'graph'/diagram that shows the 2 points; be sure to label the points).

Easting diff.: _____ Northing diff.: _____ Straightline: _____

- j) Use the newer (NAD 83) Nanaimo map (92 G/4) and determine the **lat./long.** coordinates (nearest second) for **Shaft Point on Newcastle Island**.

latitude: _____ longitude: _____

- k) Use the **Blackjack Lake map** (092F.020) and determine the **UTM** coordinates (nearest 10 metres) for spot height '479'.

Zone: 10N Easting: _____ Northing: _____

- l) Use the **Blackjack Lake map** (092F.020) and determine the **lat./long.** coordinates (nearest second) for spot height '479'.

latitude: _____ longitude: _____

- m) Convert the latitude & longitude to decimal degrees. Show your calculations and express to 3 decimal places.