Victoria University of Wellington
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Special Admission
Mathematics
Practice Assessment
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Tēnā koutou, talofa lava, hello,

Kia ora/thank you for your interest in studying at Victoria University.

- You have 40 minutes to complete this assessment.
- You may use a calculator.
- Answer all questions. Show your working out in the space provided.
- Choose the best answer for each of the multi-choice questions.
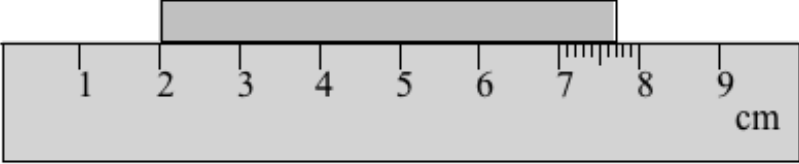- Marks for each question are indicated on the right. The total is 30.

Please note that this assessment does not represent what is expected in your first year of university study, but is simply assessing how well you meet the university entrance requirements.

Please fill out the details below, to the best of your knowledge, and attempt to answer each question.
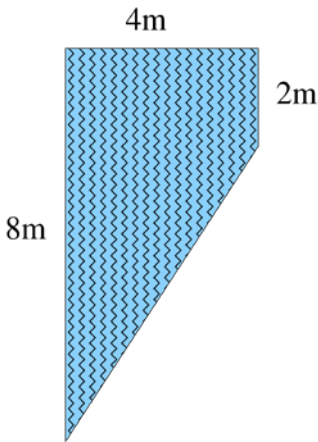
FULL Name: ....

Date: ....

Student ID: ....

	Answers	
1. Steven sends 9 texts a day. How many texts does he send in total over 4 weeks and 3 days?	_____	/1
2. A restaurant bill of $210.70 is shared equally between 7 people. How much does each person pay?	_____	/1
3. Using the diagram, what is the length of the rod? ![ruler diagram showing a rod from 2 to about 8 cm] 1 2 3 4 5 6 7 8 9 cm	_____	/1
4. Sione is working on an assignment. He has finished 2/5 of the assignment. What percentage has Sione finished?	_____	/1
5. A goal shooter attempted 1200 goals and was successful in 79% of them. (a) What percentage did she miss?	_____	/1
(b) How many attempts were successful?	_____	/1

6. Use this number sequence for this question 32, 39, 46, 53….. (a) What is the next number in the sequence?	_____	/1
(b) What is the 14th number in the sequence?	_____	/1
7. Put these numbers in order from smallest to largest 2.7, 2.171, 1.9, 2.07, 2.71 _____	_____	/2
8. Te Aro shoots a total of 69 points in the first five basketball games of the season and 15 points in the next game. What is the average number of points Te Aro scored per game overall?	_____	/2
9. The number 0.6 is the same as: A. 1/6 B. 3/5 C. 6/100 D. 2/5	_____	/1
10. Which operation should be done first in this question? $\dfrac{2 \times (3 + 7) - 5}{4}$ A. x B. + C. - D. ÷	_____	/1

11. The normal price of a refrigerator is $950. The price is reduced by 10% in a sale.
What is the sale price of the refrigerator?

_____ /2

These formulae may be useful for questions 12. and 13.
$$A = \pi r^2 \qquad A = lw \qquad A = \tfrac{1}{2} bh \qquad v = \frac{d}{t}$$

12. A car travels 201 kilometres in 3 hours.
What is its average speed? Your answer must include units.

_____ /1

13. What is the area of this piece of carpet? Your answer must include units.

4m

2m

8m

_____ /2

14. Rawiri ran 3.8km at training. Jane ran 3.47km.
How many more **metres** did Rawiri run than Jane?

_____ /1

15. The table shows the distances between North Island cities.

North Island (km)	Auckland	Gisborne	Hamilton	Napier	Palmerston N	Rotorua	Taupo	Tauranga	Wellington	Whangarei
Auckland		530	131	428	453	239	280	215	666	173
Gisborne	530		433	199	358	291	347	306	503	703
Hamilton	131	433		297	412	108	149	119	535	304
Napier	428	199	297		159	226	148	309	304	601
Palmerston N	453	358	412	159		341	263	460	145	716
Rotorua	239	291	108	226	341		76	83	464	412
Taupo	280	347	149	148	263	76		161	386	453
Tauranga	215	306	119	309	460	83	161		547	388
Wellington	666	503	535	304	145	464	386	547		839
Whangarei	173	703	304	601	716	412	453	388	839	

(a) How far is it between Gisborne and Whangarei?

_____ /1

Steph travelled from Tauranga to Napier and then on to Wellington.
Marama went from Tauranga to Palmerston North and then on to Wellington.

(b) How far did each person travel?

_____ /2

16. Holly puts $500 in a bank account. The account gives 4.5% interest at the end of each year. Holly leaves all of the money in the account each year.

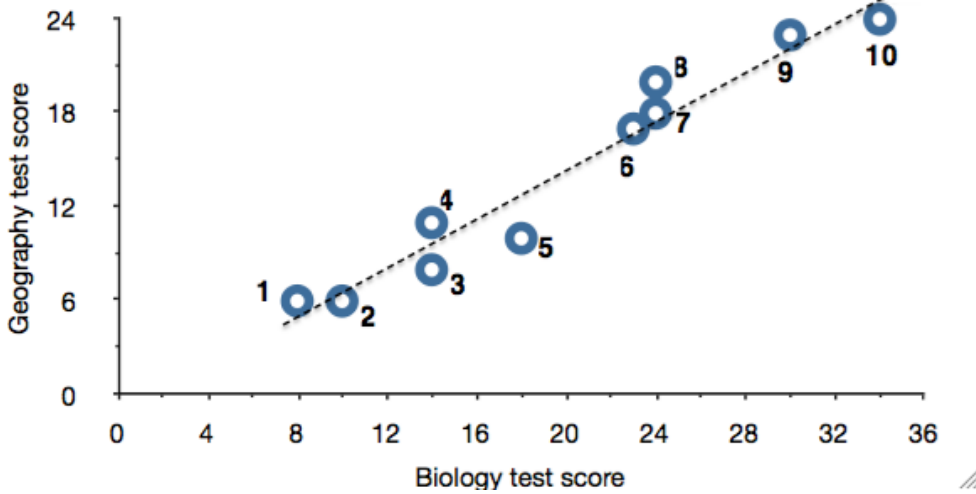How much money is in the account at the end of 3 years.

_____ /2

17. A 780 gram bag of *Yummy* raisins costs $4.10.
   Pai Rawa raisins cost $3.80 for two 330 gram bags.

Which brand is the best value for money? Show working that justifies your decision.

_____ /2

18. The graph shows the test scores for 10 students who did a Biology test and a Geography test, with the students numbered 1 - 10.

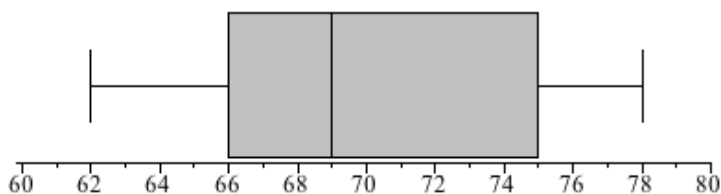(a) Use the graph to identify two people who got the same mark in the Biology test.

_____ /1

(b) Which of the statements A. – E. best describes what is shown by the graph?

A. Students who had the highest marks in Geography had the lowest marks in
   Biology
B. There appears to be no relationship between the students' results for the two
   tests.
C. No student had a Biology result greater than 25 marks.
D. Students who get high marks in Biology tended to get high marks in Geography.
E. Students who worked the hardest got the best marks.

_____ /1

19. The box plot shows the highest score, the lowest score, the upper and lower quartiles and the median for a large set of data.

Which score has 75% of the data above it?

_____ /1