



Student Name SOLUTIONS

Eastern Goldfields College

Essential Mathematics Unit 4 2016 Mental Skills Test 5

Time Allowed 10 Minutes - Total Marks: 15 marks

1. We express both <u>Latitude</u> and <u>Longitude</u> in degrees because they are measured as angles from the centre of the Earth to a point on the surface.	2. Earth has 24 different time zones each spanning how many degrees of Longitude? 15°
3. Using the arc length formula we can calculate the distance between two locations on Earth as long as they have the same <u>Longitude</u> .	4. What is the Latitude of the Equator? 0°
5. Which method will result in a larger total a) \$5000 at 2% pa compounded yearly, or b) \$5000 at 2% pa compounded half yearly?	6. Write 8% as a decimal. 0.08
7. Write 4% pa as a six-monthly rate. 2%	8. Daylight Savings is not practiced in South Australia. True or False?
9. How much time elapses between 12.45 am and 3.20 pm? 14hrs 35mins	10. Which location has a time zone that is ahead of Greenwich Mean Time? 15° E or 30° W
11. A family took out a loan to pay for a \$1000 dishwasher. Over the course of the loan, \$200 of interest was accrued. How much did the family pay altogether? \$1200	12. A \$1000 investment grew to \$2000 over ten years due to simple interest. What was the interest rate? 10%.
13. The family in Question 11 paid off the loan in 2 years. How much was their monthly repayment? $1200 \div 24 = \$50$	14. If today is Friday and you crossed the International Date line from west to east then it would be <u>Thursday</u> .
15. Appreciation is the decrease in value of items over time. True or False?	