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| EGC_Black | Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    **Eastern Goldfields College**  Essential Mathematics Unit 4 2016 Mental Skills Test 5  Time Allowed 10 Minutes - Total Marks: 15 marks 1 |
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| 1. We express both \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ 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? |
| 3. Using the arc length formula we can calculate the distance between two locations on Earth as long as they have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | 4. What is the Latitude of the Equator? |
| 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. |
| 7. Write 4% pa as a six-monthly rate. | 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? | 10. Which location has a time zone that is ahead of Greenwich Mean Time?  15° E or 30° W |
| 11. 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? | 12. A $1000 investment grew to $2000 over ten years due to simple interest. What was the interest rate? |
| 13. The family in Question 11 paid off the loan in 2 years. How much was their monthly repayment? | 14. If today is Friday and you crossed the International Date line from west to east then it would be \_\_\_\_\_\_\_\_\_\_\_. |
| 15. Appreciation is the decrease in value of items over time. True or False? |  |