

## Year 7 Term 1 Homework

<b>Student Name:</b> _____	<b>Grade:</b> _____
<b>Date:</b> _____	<b>Score:</b> _____

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# 9 Year 7 Term 1 Week 9 Homework

## 9.1 Time

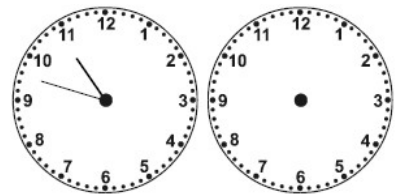
### 9.1.1 Calculations with Times

**Exercise 9.1.1** How much time has elapsed between:

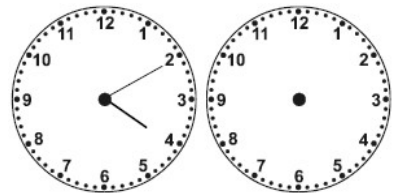
1. 3:14 am and 4: 53 pm (the same day)? \_\_\_\_\_
2. 11:25 am and 3:12 pm (the same day)? \_\_\_\_\_
3. 3:12 pm and 7:35 am (the next day)? \_\_\_\_\_
4. 5:24 am and 8:42 pm (the next day)? \_\_\_\_\_

### Exercise 9.1.2

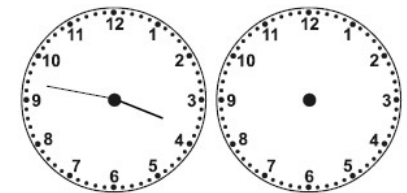
1. What time will it be 4 hours and 59 minutes? \_\_\_\_\_



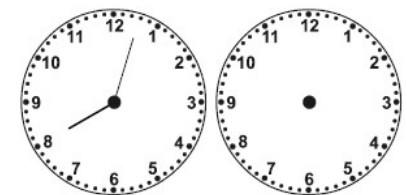
2. What time was it 4 hours and 35 minutes ago? \_\_\_\_\_



3. What time was it 1 hour and 43 minutes ago? \_\_\_\_\_



4. What time will it be 3 hour and 28 minutes? \_\_\_\_\_



**9.1.2 The Calendar**

- We write AD 1000 meaning the year which is 1000 years after the birth of Christ, and 1000 BC for the year which 1000 years before the birth of Christ.
- To find the number of years between two dates, subtract the years if both dates are AD or BC; add the the years and subtract 1 if one date is AD and other is BC.
- The year before AD 1 is 1 BC. That is there was no year 0.

**Example 9.1.1**

1. How many years are there from AD 500 to AD 2008?

*Solution: there are  $2008 - 500 = 1508$  years.*

2. How many years are there from 500 BC to 230 BC?

*Solution: there are  $500 - 230 = 270$  years.*

3. How many years are there from 128 BC to AD 228?

*Solution: there are  $128 + 228 - 1 = 355$  years.*

**Exercise 9.1.3 Find the number of:**

1. years in a decade \_\_\_\_\_
2. years in a century \_\_\_\_\_
3. decades in a century \_\_\_\_\_
4. days in 5 weeks \_\_\_\_\_
5. days in two fortnights \_\_\_\_\_
6. complete weeks in a year \_\_\_\_\_
7. years in 234 weeks \_\_\_\_\_
8. centuries in 40 decades \_\_\_\_\_
9. decades in 360 months \_\_\_\_\_
10. months in a quarter \_\_\_\_\_
11. decades in 35 centuries \_\_\_\_\_
12. days in a leap years \_\_\_\_\_

**Example 9.1.2**

1. How many days are there from 1 March to 30 June?

*Solution: The period will include days from:*

*March (30 days), April (30 days), May (31 days) and June (30 days), therefore 121 days in total.*

2. How many days are there from 12 December to 25 January?

*Solution: The period will include days from:*

*December - 19 days and January 25 days, 44 days in total*

**Exercise 9.1.4 Calculate the number of days between:**

1. How many days are there from 4 January 2005 and 8 April 2005?

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2. 8th August and Christmas Day

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3. New Year's day and Anzac Day (in 2008)

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4. Australia Day and Christmas Day (in 2008)

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**Exercise 9.1.5 How many days after the first date does the second date occur?**

1. 21 June ; 5 July \_\_\_\_\_

2. 15 July; 21 September \_\_\_\_\_

3. 27 October; 15 December \_\_\_\_\_

4. 2 February; 31 March in a leap year \_\_\_\_\_

**Exercise 9.1.6 How many years are there from:**

1. 340 AD to 1812 AD? \_\_\_\_\_
2. 8 BC to 12 AC? \_\_\_\_\_
3. 235 BC to 325 BC? \_\_\_\_\_
4. 127 BC to 721 AD? \_\_\_\_\_

**Exercise 9.1.7 Consolidation**

1. How many days are there in each season in a leap year? \_\_\_\_\_
2. During which months do the seasons occur in Australia? \_\_\_\_\_  
\_\_\_\_\_
3. How many months which have 31 days? \_\_\_\_\_
4. How many days after the first date does the second date occur:
  - (a) 21 July; 8 August? \_\_\_\_\_
  - (b) 28 April; May 12? \_\_\_\_\_
  - (c) 26 October; 15 December? \_\_\_\_\_
  - (d) 5 January; 2 March in a leap year? \_\_\_\_\_
5. What will be the date:
  - (a) 2 weeks after 24 January? \_\_\_\_\_
  - (b) 1 week after 28 December? \_\_\_\_\_
  - (c) 4 weeks after 8 August? \_\_\_\_\_
  - (d) 12 weeks after 24 July? \_\_\_\_\_

**Exercise 9.1.8 Further applications**

1. Ken needs to see his doctor every 10 days. If his last visit was on 22 July, What will be the dates of his next two appointments?

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2. Find in days the length of Christmas holidays if the school year ends on 22 December and school resumes again on 29 January.

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3. If 2008 begins on a Tuesday, on what day of the year will 2009 begin?

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4. Emma's sister Alice has her birthday 19 days before hers. If her birthday is 7 October, what is Alice's birthday?

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5. 50 years after its construction, a house was destroyed by fire in AD 18. In what year was the house built?

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6. What were the dates of the first and last days of the twentieth century?

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7. How many years are there from:

(a) 12 AD to 18 AD? \_\_\_\_\_

(b) 22 BC to 12 BC? \_\_\_\_\_

(c) 5 BC to 15 AD? \_\_\_\_\_

(d) 224 BC to 227 AD? \_\_\_\_\_

**9.1.3 Problem Solving****Exercise 9.1.9**

1. A bus departs at 11:42 am and arrives at 4:28 pm. How long was the trip?

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2. Michael went to his bed at 8:55 pm and 15 minutes later fell asleep. He then slept for 8 hours and 30 minutes.

(a) What time did Michael fall asleep?

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(b) What time did Michael wake up next morning?

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3. In winter, when it is noon in Sydney it is 11:30 am in Adelaide and 10 am in Perth.

(a) What time is it in Adelaide when it is 4:45 pm in Sydney?

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(b) What time is it in Sydney when it is 5:48 pm in Perth?

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(c) What time is it in Perth when it is 11:25 am in Adelaide?

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4. Here is a local bus timetable:

<i>North Ryde</i>	<i>Goulding</i>	<i>Badajoz</i>	<i>Coxs Rd</i>	<i>Lane Cove Rd</i>	<i>Mona Vale Rd</i>
6:46 am	6:52 am	7:08 am	7:24 am	7:45 am	8:25 am

(a) How long is the bus ride from North Ryde to Mona Vale Road?

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(b) If the bus is 8 minutes late, what time will it arrive at Lane Cove Road?

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(c) Graham catches a later bus which travels the same route at the same speed. If it leaves Goulding at 7:32 am, what time will it reach Mona Vale Road?

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## 9.2 Diagnostic Test

1. How many years are there from 2 BC to 2008 AD? [5]

1. \_\_\_\_\_

2. How many years are there from 2 AD to 2008 AD? [5]

2. \_\_\_\_\_

3. How many seconds are there in a week? [5]

3. \_\_\_\_\_

4. What will be the date 5 weeks after 28 April? [5]

4. \_\_\_\_\_

5. What is the biggest number of Mondays in a month? [5]

5. \_\_\_\_\_

6. How many years are there in five centuries? [5]

6. \_\_\_\_\_

7. How many days are there in June, July and August? [5]

7. \_\_\_\_\_

8. Convert 3 hours and 25 minutes to minutes. [5]

8. \_\_\_\_\_



9. How many years are there in a millennium? [5]

9. \_\_\_\_\_

10. How many decades are there in 25 centuries? [5]

10. \_\_\_\_\_

11. How many decades are there in a millennium? [5]

11. \_\_\_\_\_

12. How many days are there from 5 January to 8 April 2007? [5]

12. \_\_\_\_\_

13. A technician charges \$48 per hour. If he begins a job at 9:35 am and finished at 2:05 pm how much will he be paid? [5]

13. \_\_\_\_\_

14. How many months have 30 days? [5]

14. \_\_\_\_\_

15. What will be the date 2 weeks after 17 November? [5]

15. \_\_\_\_\_

16. How many minutes are there in  $3\frac{2}{5}$  hours? [5]

16. \_\_\_\_\_

17. In Winter, when it is noon in Adelaide it is 12:30 pm in Sydney and 10:30 pm in Perth.

(a) What time is it in Adelaide when it is 2:30 pm in Sydney? [5]

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(a) \_\_\_\_\_

(b) What time is it in Perth when it is 11:30 pm in Adelaide? [5]

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(b) \_\_\_\_\_

18. The following table shows the the times difference between major cities around the world. (without considering the daylight saving)

Los Angeles:	4 am	New York:	7 am	London:	Noon
Tokyo:	9 pm	Sydney:	10 pm	Auckland:	Midnight

(a) How many hours is Auckland ahead of Tokyo? [5]

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(a) \_\_\_\_\_

(b) If it is 5 pm in London, What time is it in Sydney? [5]

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(b) \_\_\_\_\_

### 9.3 Math Challenge

1. If  $\frac{1}{6} + \frac{1}{N} = \frac{1}{5}$ , what is the value of N?

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2. All students in Miss Calor's class paid the same amount for their End-of-Year Party. The boys paid a total of \$70 and the girls paid a total \$80. However, buying gifts raised the total to \$210, so each student have to paid an additional \$2. How many boys and girls in Miss Calor's class?

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3. The five-digit number 234A2 is divisible by 12. What digit does A represent?

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4. The sum of 7 consecutive numbers is 105. What is the product of the smallest and largest of these numbers?

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5. What is the smallest positive number that is divisible by 3 but not 4, by 5 but not 6, and by 7 but not 8?

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### 9.4 Miscellaneous Exercise

1. What is the greatest odd factor of 3080?

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2. Suppose it is now the month of July. What month will it be 100 calendar months from now?

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3. When a certain tank of water is 85% empty, it contains exactly 18 litres. What is the capacity of the water tank?

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4. The length of the sides of triangle ABC are such that  $AB : BC : CA = 6 : 5 : 2$ . Calculate the perimeter of the triangle ABC if the length of  $AC = 10$  cm.

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5. James has 18 marbles more than Keith and Keith has 4 marbles more than David. If they have 62 marbles altogether, find the number of marbles each boy has.

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