

Year 7 Term 1 Homework

Student Name: _____	Grade: _____
Date: _____	Score: _____

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10 Year 7 Term 1 Week 10 Homework

10.1 Time

10.1.1 Time with a Calculator

You will use the key **DMS** or $\circ ' ''$ depending on your calculator.

- Use the calculator to convert the minutes to hours and minutes.

For example: 265 min = 4 hours 25 minutes.

Press $\boxed{0} \circ ' '' \boxed{2} \boxed{6} \boxed{5} \circ ' '' \boxed{0} \circ ' '' =$

- Convert seconds to hours and minutes and seconds.

For example: 5829 s = 1 h 37 min 9 s

Press $\boxed{0} \circ ' '' \boxed{0} \circ ' '' \boxed{5} \boxed{8} \boxed{2} \boxed{9} \circ ' '' =$

- Adding the following times 1 h 24 min 36 s + 48 min 37 s = 2 h 13 min 13 s.

$\boxed{1} \circ ' '' \boxed{2} \boxed{4} \circ ' '' \boxed{3} \boxed{6} \circ ' '' + \boxed{0} \circ ' '' \boxed{4} \boxed{8} \circ ' '' \boxed{3} \boxed{7} \circ ' '' =$

- Convert 2 h 13 min 38 s to seconds. For example: 2 h 13 min 38 s = 8018 seconds.

$\boxed{2} \circ ' '' \boxed{1} \boxed{3} \circ ' '' \boxed{3} \boxed{8} \circ ' '' \times \boxed{6} \boxed{0} \times \boxed{6} \boxed{0} =$

Exercise 10.1.1 Use your calculator to convert the following:

- 2 h 38 min to minutes _____
- 49 min 19 s to seconds _____
- 17 min and 43 s to seconds _____
- 5200 s to hour, minutes and seconds _____
- 1089 min to hours and minutes _____
- 3 h 14 min 15 s to seconds _____
- 3670 s to hours, minutes and seconds _____

Exercise 10.1.2 Complete the following calculations:

- 3 h 43 min + 2 h 28 min = _____
- 7 h 28 min + 6 h 53 min = _____
- 12 h 5 min - 5 h 12 min = _____
- 17 min 23 s - 8 min 49 s = _____

10.1.2 Timetables

Exercise 10.1.3 Use the school timetable to answer the following questions. School starts at 8:40 am and finishes at 3:00 pm.

Lesson	M, Tu, F	Wed	Thurs
1	8:40	8:40	8:40
2	9:20	9:05	9:17
3	10:00	9:48	9:54
Recess	10:40	10:30	10:31
4	11:00	10:50	10:49
5	11:40	11:32	11:26
Lunch	12:20	12:14	12:03
6	1:00	12:54	12:40
7	1:40	1:36	
8	2:20	2:18	

Monday	Tuesday	Wednesday	Thursday	Friday
English	Science	Assembly	Lang.	Science
Social Science	Science	Maths	Social Science	Comp.
Lang.	English	Lang.	Maths	Groups
Recess				
Maths	Comp.	Art	English	Lang.
Maths	Comp.	Science	English	Social Science
Lunch				
Science	Social Science	Social Science	Sport	Maths
P.E.	Social Science	Music	Sport	Art
P.E.	Music	English	Sport	Art

- How long is the sport timeslot on Thursday? _____
- Which subjects are the students studying at a quarter past 9 on Thursday and 13:15 on Friday?

- How long is the double lesson of Science on Tuesday? _____
- On which subject do the student spend most time? _____
- On which day is lunch shortened? _____

10.1.3 Time Zones

In Australia there are three time zones:

1. Eastern Standard Time (EST) is used on the eastern seaboard and applies for most Queensland, NSW, Victoria and Tasmania.
2. Central Standard Time (CST) is used on South Australia and Northern Territory.
3. Western Standard Time (WST) applies for Western Australia.
4. EST is 30 minutes ahead of CST and 2 hours ahead of WST.
5. To avoid the confusion we will ignore daylight saving for all our questions.

Exercise 10.1.4 Complete the table:

<i>WST</i>	<i>CST</i>	<i>EST</i>
		<i>5:30 pm</i>
<i>11:00 pm</i>		
	<i>3:15 pm</i>	
<i>8:15 pm</i>		
	<i>2:45 am</i>	
		<i>12 midnight</i>
<i>12:00 noon</i>		

Exercise 10.1.5

1. An aeroplane leaves Brisbane at 12:20 pm flying to Adelaide. If the flight takes 105 minutes, at what time does it arrive in Adelaide?

2. If Los Angeles (USA) is 16 hours behind EST and it's 6 am in Los Angeles, what is the time in Sydney, NSW?

3. London time is 10 hours behind EST, and a direct flight takes $23\frac{1}{2}$ hours. A plane leaves Sydney at 10:20 am. At what time will it reach London?

10.2 Problem Solving (Fractions)

1. There are 875 apples and oranges at a fruit stall. $\frac{1}{3}$ of the apples is equal to $\frac{1}{4}$ of the oranges.

(a) Find the number of apples.

(b) How many more oranges than apples?

2. There are 840 cows and sheep on a farm. $\frac{3}{5}$ of the sheep is equal to $\frac{3}{7}$ of the cows. Find the difference in the number of cows and sheep on the farm.

3. There are 340 large eggs and small eggs at a stall. $\frac{2}{5}$ of the large eggs is equal to $\frac{4}{7}$ of the small eggs. If each small egg is sold for 25 cents each and large egg is sold for 5 cents more, how much will the stall holder collect from the sale of all the eggs?

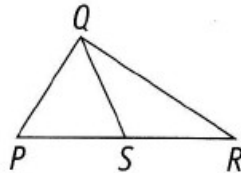
4. There were 830 orange and apple trees in a plantation. A fire destroyed $\frac{2}{5}$ of the apple trees. 50 more orange trees were then planted. As a result, the number of orange trees in the plantation was $\frac{1}{6}$ of the number of apple trees. How many more apple trees than orange trees were there in the plantation at first?

10.3 Maths Challenge

1. If a two digit number divided by the sum of its digits, what is the largest remainder?

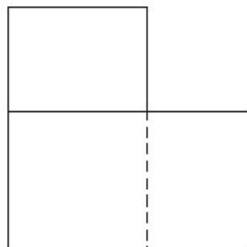
2. I start counting at 19 and go on to 89, taking one second to say each number. How long do I take altogether?

3. In the diagram the lengths SP, SQ and SR are equal and the angle SRQ is x° . What is the size of angle PQR?



4. A car with five tyres (four road tyres and a spare) travelled 36,000 km. All five tyres traveled equally. How many kilometres did each tyre travel?

5. Two rectangles measuring 10 cm by 7 cm are overlapped to form an L-shape, as shown in the figure below. What is the area of the figure?



10.4 Miscellaneous Exercise**Exercise 10.4.1**

1. Ken stands in a line of people. He is the 28th person counting from the front of the line. He is 15th person counting from the rear. How many people are in the line?

2. The ages of David, Cathy and Joe are prime numbers. David is the youngest. The sum of the ages of David and Cathy is equal to Joe's age. How old is Cathy?

3. Two old grandfather clocks are set correctly at 9:00 a.m. One gains 2 minutes every two hours. The other one loses 1 minute every two hours. At what time the next day will the faster one be exactly one hour ahead of the slower one?

4. Charles drove from Ceduna to Kalgoorlie. This trip took him $18\frac{1}{2}$ hours. Kalgoorlie is $1\frac{1}{2}$ hours behind the time in Ceduna. If Charles started driving from Ceduna at 6:45 a.m. what time was it in Kalgoorlie when he arrived?

5. A fast clock gains 5 minutes every normal hour and the fast clock shows the correct time at 9:00 a.m. What is the correct time when the fast clock first registers 10:00 p.m.?

Exercise 10.4.2

1. A light flashes every 1 minute 15 seconds. The second flashes every 1 minute 25 seconds. The third one flashed every 1 minute 40 seconds. Suppose they flash together at a certain time. What is the shortest amount of time that will elapse before the lights will flash again together?

2. A fast watch gains two minutes per hour and a slow watch loses one minutes per hour. At a certain time, both watches are set to the correct time. Less than 24 hours later, the fast watch registers 10 o'clock. At the same moment that the slow watch registers 8 o'clock. What is the correct time at that moment?

3. A light flashes every 1 minute 20 seconds, another light flashes every 2 minutes 20 seconds. Suppose both lights flash at 8:00 a.m. What is the next time of the day they will both flash together?

4. Sam and Tom are bricklayers. Sam can lay 200 bricks in one hour, while Tom can only lay 45 bricks in 15 minutes. Working together, how many minutes will it take Sam and Tom to lay 900 bricks?

5. A slow clock loses 2 minutes every hour. Suppose the slow clock and a correct one both show the correct time at 8:00 a.m. What time will the slow clock show when the correct clock shows 11:00 p.m the same day?
