

**ASPLEY STATE HIGH SCHOOL  
YEAR 11 PRE-VOCATIONAL MATHEMATICS  
SEMESTER 1 2009  
ASSIGNMENT 2**

Date given: 13<sup>th</sup> May

**Due date: 4<sup>th</sup> June**

3 weeks

Student's Name \_\_\_\_\_

Teacher's Name \_\_\_\_\_

KNOWING

APPLYING

EXPLAINING

/ 10 =      %

Q8	Q9	Q10

A B C D E

**Minimum Standard**

- 1) Must complete Q1, Q2, Q3, Q4, Q5
- 2) Must complete one of Q8, Q9 Q10
- 3) Assignment must be set out neatly showing all working where required.

**WORKING FOR YOURSELF**

Some people would rather organise their own work rather than work for someone else. Roberto's expenses are becoming too high to be covered by his allowance. He decides he needs to earn some money.

When he finishes school he plans to go to TAFE to study landscape gardening. He thinks that a lawn mowing and gardening service could give him some valuable experience and much needed cash.

To work out how much he should charge to mow a lawn, Roberto needs to work out his expenses.

- His lawnmower uses \$6 worth of fuel every 4 hours.
- He thinks he should make \$15 per hour for his labour.

- Q1.** What is the cost of fuel per hour for Roberto's lawnmower? 1 mark
- Q2.** How much should Roberto charge per hour to cover his labour and lawnmower costs? 1 mark
- Q3.** It takes Roberto 30 minutes to cut a small lawn. This includes a reasonable amount of travelling time in the local area. How much should he charge for mowing a small lawn? 1½ mark
- Q4.** For large lawns he takes 1hour and 15minutes. How much should he charge for a large lawn? 1½ mark

- Q5.** Roberto charges \$3 per bag to remove the clippings, which needs to be added to each job. Fill in the missing details in his advertisement:

**Roberto's Lawnmowing and Gardening Service**

Small residential lawns    a \_\_\_\_\_

Large residential lawns    b \_\_\_\_\_

Gardening    c \_\_\_\_\_

Rubbish removal option    d \_\_\_\_\_

With every lawn mowed, edges cut free of charge.  
Quotations available for larger properties and businesses.

Phone Roberto 0352 4000 after 4 pm.



1 mark

- Q6.** Roberto decides to have 300 copies of his advertisement printed. How much will the company “Quick as a Flash Printing” charge for this work?

Quick as a Flash Printing	
Letterbox advertisements	
on recycled paper	
First 100	\$28
Additional copies	\$20 per hundred

1 mark

- Q7.** The local preschool manager asks Roberto to quote for mowing the lawns and weeding the garden. He estimates that it will take him  $2\frac{1}{2}$  hours to mow the grass and about an hour to weed the garden. He will have four bags of rubbish to remove. How much should Roberto quote? 3 marks

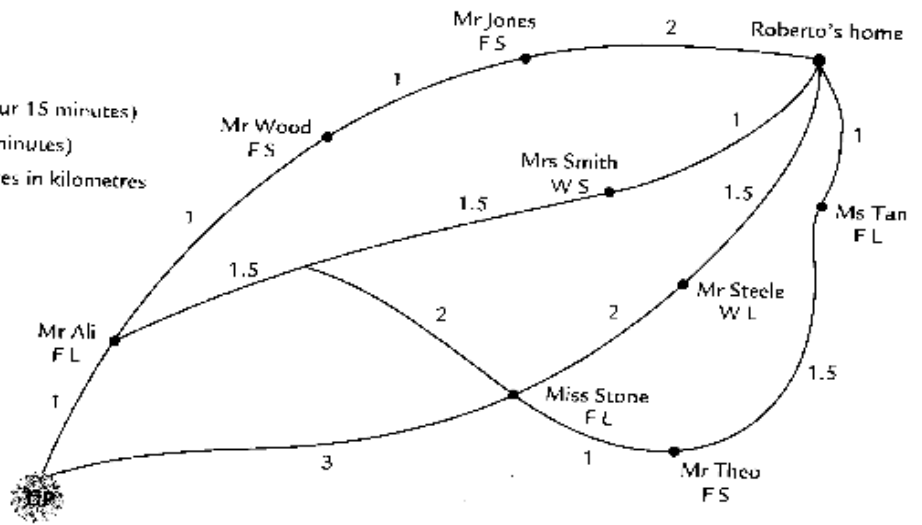
## APPLYING

- Q8.** As a result of his advertising Roberto receives 8 regular jobs. He draws a sketch showing the locations of the jobs, whether it is weekly or fortnightly, and the time each job will take, including travelling time. Roberto plans to work only on Saturdays. His map is shown below.

Your challenge is to construct a work roster that will minimise his travelling time and give him approximately the same number of hours work each Saturday. Remember he will need to finish at the tip each Saturday afternoon.

**Roberto's code**

W is weekly  
 F is fortnightly  
 L is large lawn (1 hour 15 minutes)  
 S is small lawn (30 minutes)  
 Numbers are distances in kilometres



**Q9.** Employees at Wang's Patisserie earn time-and-a-half for hours worked over 40 hours. Complete the pay sheets for these employees and calculate their wages for the week.

Casey		Hourly rate:\$12.30	
Day	In	Out	Hours
Mon	9:00am	5:00pm	
Tue	9:00am	5:00pm	
Wed	9:00am	5:00pm	
Thu	9:00am	9:00pm	
Fri	9:00am	9:00pm	
Sat			
Sun			
Total hours			
Total wage			

Chris		Hourly rate:\$13.70	
Day	In	Out	Hours
Mon	7:30am	5:00pm	
Tue	7:30am	5:00pm	
Wed	9:00am	5:00pm	
Thu	9:00am	8:00pm	
Fri	10:00am	4:00pm	
Sat	8:00am	3:30pm	
Sun	9:00am	1:00pm	
		Total Hours	
		Total wage	

**Q10.** Ian is the accountant at Fenster's Retreat and he is in charge of employees' wages.

Employees at Fenster's Retreat are paid overtime at the following rates:

- Normal rates when they work 40 hours or less.
- Time-and-a-half when they work up to 5 hours more than 40 hours.
- Double time when they work over 45 hours in the week.

a) Complete the wage sheet for Fenster's Retreat employees.

Name	Rate per hour	Hours worked	Normal pay	Time and-half hours	Time and-half pay	Doubletime hours	Doubletime pay	Total wage (Normal + Overtime)
David	\$17.50	38						
Kelly	\$19.00	42						
Richelle	\$18.60	43						
Jenny	\$17.00	45						
Shinta	\$19.50	47						
Darren	\$10.00	39						
Daniel	\$11.20	30						
Tanya	\$13.70	35						
Sarah	\$16.50	40						
Linda	\$12.10	41						
Cherin	\$17.20	47						

b) Find the total wages required by the firm for the week