Name: _____ Date: _____

Baldivis Secondary College

Year 11 Applications

Test 2, 2017

Topics – Other Financial Considerations and Pythagoras' Theorem

	52
	=_____ %

Total Time: ***50*** *minutes*

Total Reading: *5 minutes*

Total Working: *45 minutes*

Weighting: *4% of the year,8% of the semester.*

Equipment: *SCSA Formula Sheet; 1 page notes (A4 one side, **Unfolded**), CASIO ClassPad; Scientific Calculator*

SECTION 1: CALCULATOR FREE

Time:	*17 minutes*	**Marks for Section 1:**	*15*
Reading:	*2 minutes*	**Equipment Allowed:**	*Nil*
Working:	*15 minutes*		

1. [2 marks]

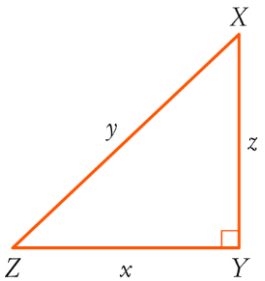
A real estate agent charges the following commission for selling properties:

- 10% for the first $80 000
- 5% for the next $50 000
- 1% for the remaining amount

What commission will the real estate agent earn for selling an apartment for $120 000?

2. [1 mark]

Which equation below is correct for triangle *XYZ* according to Pythagoras' theorem?



A $x^2 = y^2 + z^2$

B $y^2 = x^2 - z^2$

C $y^2 = x^2 + z^2$

D $x^2 = z^2 + y^2$

E $z^2 = x^2 + y^2$

3. [3 marks]

A section of a spreadsheet, provided below, shows the number of hours worked by three students during the course of a week. The students are paid **time and a half on Saturdays** and **double time on Sundays**.

	A	B	C	D	E	F
1	**Name**	**Rate ($/hour)**	**Weekday hours**	**Saturday hours**	**Sunday hours**	**Total pay**
2	Gen	20	5	6	3.5	
3	Bri	22.5	10	3	3	
4	Ala	23.68	8	4	6	

a) How much will Gen earn in a week?

4. [3 marks: 1, 1, 1]

Cereal is available in the following packs:

400g for $8.00 and *250g for $7.50*

Determine:

a) The cost per gram of the larger box.

b) The cost per gram of the smaller box.

c) Which of the two packs is the better value?

5. [1 mark]

Determine the price to earnings ratio for a share with a price of $8.00 and dividends in the last twelve months totalling 75 cents per share.

6. [1 mark]

Andrew picks cherries and earns $3.50 per bucket. How many buckets does he need to pick to earn ***over*** $300?

7. [4 marks: 1, 1, 1, 1]

This table shows the payment rates for people who are on the Newstart allowance. To be eligible for Newstart you must be 22 years of age or older and unemployed but looking for work.

Status	Dependents	Fortnightly allowance
Single	No	$492.60
Single	Yes	$533
Partnered		$444.70

For each of the following state whether they are eligible. If they are, state the amount of allowance that they receive.

a) Kym, aged 24, is single, unemployed and without children. She is looking for work.

b) Jake, aged 34, is married with no children. He has a part-time job and is looking for full-time work.

c) Gregor, aged 28, is a single father who cares for his two children full-time. He is looking for work.

d) Maxine, aged 20, is single and has one child. She is looking for work.

~ END OF TEST SECTION 1 ~

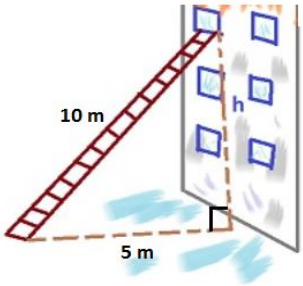
Name: _____ Date: _____

SECTION 2: CALCULATOR ASSUMED

Time:	***33** minutes*	**Marks for Section 2:**	*37*
Reading:	*3 minutes*	**Equipment Allowed:**	*1 page notes (A4 one side, unfolded), CASIO ClassPad, scientific calculator*
Working:	*33 minutes*		

8. [2 marks]

Firemen have a 10m ladder and they are unable to get closer than 5m from the base of a building due to obstructions. Will the ladder be longer enough to reach a window that is 8.5m high? (Show all working)



11. [4 marks: 2, 1, 1]

A swimming instructor is paid $18.50 per hour for normal hours and paid time-and-a-half overtime for any hours after 5:00pm and any hours completed on weekends.

Day	Start time	Finish Time	Normal Hours	Overtime Hours
Monday	10:00am	1:00pm		
Tuesday	9:30am	11:30am		
Wednesday	10:30am	2:00pm		
Thursday	11:30am	6:30pm		
Friday	1:00pm	9:00pm		
Saturday	11:30am	2:30pm		
Sunday	11:00am	1:00pm		

a) Complete the last two columns of the table

b) What were the total hours for the week at normal rate of pay and at overtime rate of pay?

Normal Hours = Overtime Hours =

c) What was the swimming instructor's total pay for the week?

12. [5 marks: 1, 2, 2]

Use this Information relating to the Baby Bonus to answer the following questions.

centrelink

Baby Bonus

A payment made in 13 fortnightly instalments that helps with the costs of a child who is born or adopted before 1 March 2014. Baby Bonus is payable if your family's estimated combined adjusted taxable income is $75,000 or less in the 6 months after your child is born or enters your care. If you became eligible for Baby Bonus, on or after 1 July 2013, Baby Bonus is either $5,000 or $3,000 depending on your situation. You can get the $5,000 payment if your child is the first child you or your partner have given birth to (excluding stillbirth), adopted, or had entrusted to your care within 26 weeks of birth. Otherwise, you can get the $3,000 payment. If you are eligible for $5,000, you will get $846.20 in the first fortnight and then the remainder in equal instalments over next 12 fortnights. If you are eligible for $3,000, you will get $692.40 in the first fortnight and the remainder in equal instalments over the next 12 fortnights.

a) A couple apply for the baby bonus, it's their first child and their combined income is $85 000. Will they receive a baby bonus?

b) Another family are celebrating the arrival of their second child and they are eligible for the Baby bonus. How much will they receive and what will be their fortnightly payments?

c) A young couple are having their first child. The father's income was $42 000 over the last 6 months and the mother earned $15 500. Are they eligible for the bonus and if so how much in total will they receive?

13. [6 marks: 1, 1, 1, 3]
Courtney bought 120 Facebook Inc. stock shares at $65.80 per share.

a) How much did this cost her?

b) Her broker charges a commission of 1.5% of the total sales. Calculate how much brokerage Courtney paid.

c) In the first year Facebook paid a dividend of 45c per share and in the second year they paid a dividend of 55c per share. Calculate Courtney's total dividend payment for the two years.

d) Courtney decides to sell her shares after two years for $60 per share. If her broker charges another 1.5% brokerage, calculate Courtney's total profit or loss over the two year period.

14. [3 marks]

Freddy is a freelance programmer and he earns an amount for each app he creates based on the following criteria

- Complex Apps: $55/hr. he works on it + $1500 bonus for completing it on time
- Simple Apps: $40/hr. he works on it + $1000 bonus for completing it on time

Freddy completes the following jobs over the course of a month:

- ✓ Hungry Hungry Birds: Simple, took 18 hours to complete on time
- ✓ Clash of Khans: Complex, took 14 hours to complete on time
- ✓ Janitor Simulator Complex, took 35 hours to complete on time
- ✓ Temple Jogging Simple, took 6 hours, but was **not** completed on time.

How much did Freddy earn during this month?

15. [6 marks]

The Newstart Allowance is available to anyone over 22 years old. The payment rates are:

Status	Fortnightly Payment
Single (no children)	$527.60
Single (with dependent child or children)	$570.80
Single aged 60 or over	$570.80
Partnered (each)	$476.40 (each)

People that qualify for the Newstart are allowed to earn an income but this reduces the total fortnightly payments according to the following table:

Income per Fortnight	Reduction in Fortnightly Payment
$102 - $252	50 cents in the dollar
More than $252	60 cents in the dollar

Calculate the Newstart Allowance for each of the situations below

a. Sally is single and is 65 years old. She earns $75 per fortnight.

b. Mark is 35 years old, single and has one dependent child. He earns $9100 p.a. working part-time.

c. Chris and Christine have no children. Both of them work and their combined income is $10 400 p.a. They each earn $5 200.

16. [7 marks]

Some information about four companies listed on the Australian share market is shown in the table below.

Company	ASX Code	Market Value of Share ($)	Earnings per Share (cents)	Price-to-Earnings Ratio	Annual Dividend (cents)	Percentage Dividend (%)
Aquiks	AQK	7.18	21.6	33.2	233.4	3.25
Bovex	BVX	0.84	15.3	**A**	2	2.4
Crood	CRD	68.50	**B**	22.4	465.8	6.8
Defty	DTY	16.52	87.4	18.9	**C**	3.6

a. Determine the missing values of A, B, and C in the table.

b. A portfolio of shares consists of 300 AQK shares, 250 DTY shares and 45 BVX shares.
Determine the market value of this portfolio.

c. Another portfolio has 400 AQX shares and 200 CRD shares.
Determine the total dividend paid on this portfolio.

d. Which company's shares are the best value based on the Price-to- Earnings Ratio?

17. [4 marks]

Gabe is planning a safari holiday in South Africa and will need to change some money. He visits two places that can convert Australian Dollars (AUS$) into South African Rand (ZAR).

	Currency	Rate
TravelY	**ZAR**	10.25
BankZ	**ZAR**	10.40

a. Gabe needs to change $3 500 before he leaves. Which business should he go to change his money into Rand? Justify your answer.

b. How many Rand can Gabe buy with his given budget?

c. After the holiday Gabe finds he spent less money than he expected.
He has ZAR10 000.00 left over and needs to change it back into AUS$. Assuming the exchange rate hasn't changed, what is the most amount of AUS$ Gabe could get back?

~ END OF TEST SECTION 2 ~