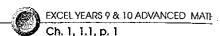
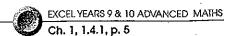
Chapter 1 Consumer arithmetic



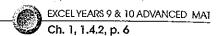
UNIT 1: Earning and saving money

		· · · · · · · · · · · · · · · · · · ·
Michelle works for 40 hours per week and is paid \$12.80 per hour. Find her weekly wage.	b	John works for 37 hours in a week and his weekly wage is \$582.75. Find his hourly rate of pay.
ESTION 2 Brent's normal wage is \$672 for a 40-hour week.	eek. He	worked overtime and earned \$873.60 in one
i Find his normal hourly rate.	ii	How much extra did he get for overtime?
	•	
iii How many hours of overtime did he wor	k if he w	as paid double time for the overtime worke
,		•
Sarah works for the Department of Taxation		
		·
holiday loading on the four weeks holiday p i her normal pay for four weeks.	ay perio	·
holiday loading on the four weeks holiday p	ay perio	d, calculate:
holiday loading on the four weeks holiday p	ay perio	d, calculate: her holiday loading.
holiday loading on the four weeks holiday p i her normal pay for four weeks.	ay perio	d, calculate: her holiday loading. If she saves 30% of her total holiday pay fo
holiday loading on the four weeks holiday p i her normal pay for four weeks. iii her holiday pay for the four weeks.	ay perio ii iv	d, calculate: her holiday loading. If she saves 30% of her total holiday pay for four weeks, how much is her savings?
holiday loading on the four weeks holiday p i her normal pay for four weeks.	ay perio ii iv	d, calculate: her holiday loading. If she saves 30% of her total holiday pay for four weeks, how much is her savings? yearly salary is \$68 000. Her fortnightly
holiday loading on the four weeks holiday p i her normal pay for four weeks. iii her holiday pay for the four weeks. Louise works as a dentist in a dental hospital deductions include income tax \$960, medical	ay perio ii iv	d, calculate: her holiday loading. If she saves 30% of her total holiday pay for four weeks, how much is her savings? yearly salary is \$68 000. Her fortnightly



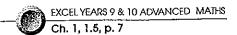
UNIT 2: Simple interest

\$7800 at 12%p.a. for 3 years.	ь	\$6500 at 4% p.a. for 2 years.
\$12 500 at 15% p.a. for 6 months.	d	\$13 000 at 16% p.a. for 7 months.
↑100 for 50 days at 20% p.a.	f	\$20 000 for 25 days at 15% p.a.
55000 for 5 months at 0.8% per month.	h	\$7000 for 3 months at 0.6% per month.
\$60 000 for 20 days at $5\frac{1}{2}$ % p.a.	j	\$80 000 for 35 days at $6\frac{3}{4}$ % p.a.
	•	
STION 2 1 and the interest rate if a principal of \$2500	yields int	erest of \$625 in 2 years.
	ears at 9%	6 p.a. Find the principal invested.
	ears at 9%	% p.a. Find the principal invested.
An investment yielded \$4500 interest in 4 y \$8500 was invested at 15% p.a. Find the numerinterest earned was \$3825.		



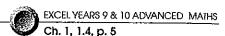
UNIT 3: Compound interest

Ç	\$5000 for 5 years at 5% p.a.	•	b	\$8500 for 6 years at 12% p.a.
-		-		-
4	\$12 000 for 2 years at 8% p.a.	- -	d	\$55 000 is invested for 3 years at 9% p.
_		-		
4	\$3650 for 5 years at 6.5% p.a.	 .	f	\$32 000 for 3 years at 7.25% p.a.
-				
			-	
-				
_				
	STION 2 Calculate the total amount who			
	Calculate the total amount whe		ntere	st is compounded monthly.
			ntere	st is compounded monthly.
			ntere	st is compounded monthly.
-		f the ir		
-	549 000 is invested at 12% p.a. for 5 years i	f the ir		
-	549 000 is invested at 12% p.a. for 5 years i	f the ir		
\$	549 000 is invested at 12% p.a. for 5 years i	f the in	ntere	st is compounded quarterly.
\$	549 000 is invested at 12% p.a. for 5 years in 530 000 is invested at 18% p.a. for 7 years in 58 000 is invested at 10% p.a. for 3 years if	f the in	ntere	st is compounded quarterly.
\$	549 000 is invested at 12% p.a. for 5 years i	f the in	ntere	st is compounded quarterly. t is compounded six-monthly.
\$	549 000 is invested at 12% p.a. for 5 years in 530 000 is invested at 18% p.a. for 7 years in 58 000 is invested at 10% p.a. for 3 years if	f the in	ntere	st is compounded quarterly.
\$ - \$ \$	549 000 is invested at 12% p.a. for 5 years in 530 000 is invested at 18% p.a. for 7 years in 58 000 is invested at 10% p.a. for 3 years if	f the in	ntere	st is compounded quarterly. t is compounded six-monthly.
\$ \$	549 000 is invested at 12% p.a. for 5 years in 530 000 is invested at 18% p.a. for 7 years in 58 000 is invested at 10% p.a. for 3 years if	f the int	ntere	st is compounded quarterly. t is compounded six-monthly.



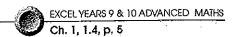
UNIT 4: Depreciation

Car: Cost price \$35 000; rate of depreciation 15% p.a.; time 7 ye		
Furniture: Cost price \$20 000; rate of depreciation 12% p.a.; tim	ne 3 years.	
Television: Cost price \$5 000; rate of depreciation 8% p.a.; time	4 years.	
Computer: Cost price \$3 000; rate of depreciation 10% p.a.; tim	e 2 years.	
ETION 2 A business buys new machinery for \$80 000 that depreciates at i its value after 3 years. ii the amo	t the rate of 20% pount of depreciation	a. Calculate:
A business buys new machinery for \$80 000 that depreciates at it is value after 3 years. ii the amount ii the amou	ount of depreciation	on.
A business buys new machinery for \$80 000 that depreciates at its value after 3 years. ii the amo	ount of depreciation	on.
A business buys new machinery for \$80 000 that depreciates at it its value after 3 years. ii the amount iii the amount ii the amount iii the amount iii the	value is \$46 000, fi	nd its value afte



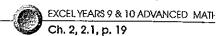
UNIT 5: Interest, depreciation and problems

Calculate the principal to be invested at 8% p.a. for 5 years to earn an interest of \$4800.
At what rate should \$15 000 be invested to earn an interest of \$3600 in 3 years?
Calculate the total amount when \$60 000 is invested at $9\frac{1}{2}$ % p.a. for 4 years if the interest is compounded yearly.
At the start of 1995 a town had a population of 12 000. Since then the population has increased anually by 5% of the existing population. Find its population at the start of the year 2000.
An airline company bought a jet for \$5 000 000. If it depreciates at the rate of 15% per year, wh will be its value after 6 years?
An industrial firm has machinery of the value of \$800 000. Its value depreciates at the rate of 2 per year. What will be its value at the end of 6 years?



UNIT 6: Borrowing money

Que	ESTION 1	Nelly wante manager ap years.	ed to buy a car and a proved the loan at a	approached an interest	l a bank for a pers rate of 8% p.a. Sho	sonal loan of \$2 e has to repay t	20 000. The the loan in 5
a	What inte	erest will Nell	y pay during that p	eriod?			
				<u> </u>	· · · · · · · · · · · · · · · · · · ·	·	
Ь	What wil	l be her mont	hly repayment?			,	
Qui	ESTION 2	Michael dec	cided to buy a TV m s, with interest char	arked at \$3 ged at 15%	3000. He pays 20% on the balance.	6 deposit and t	he balance
a	Find the	deposit paid.		b	Calculate the ba	lance owing.	
		.1		_ _ _ d	Find the total ar	nount to be rer	
С	Calculate	e the interest p	oaid.	- -			
e	What is t	he monthly re	epayment?	- .			
Qui	ESTION 3	charged is !	s to buy a boat and 9.5% flat. There is al The loan is repaid o	so a loan p	rotection fee of 30) cents for each	terest rate \$100
a	Calculate	e the total am		ь	Find the amoun		ly repayment.
		,		- 			
c	Given th	e formula E= instalments,	$=\frac{2Rn}{n+1}$, where R% is calculate the effective	the flat rate ve interest 1	e of interest and n rate $E\%$ on this lo	is the total nu	mber of equal
			:			·	



UNIT 7: Home loans

ESTION 1	Andrew buys a house for \$300 building society which charges		rrows 80% of the purchase price from a
Find the	deposit paid.		
What is tl	ne amount of interest charged pe	r year on t	he balance owing?
If \$2900 is interest)?	s paid per month, how much of t	he balance	is paid during the first year (assume simp
· · · · · · · · · · · · · · · · · · ·			•
ESTION 2	Yvette buys a house for \$190 00 balance at \$850 per month for 2		leposit of \$50 000, and then pays off the nd:
the total o	cost of the house.	b	the yearly interest paid.
· · · · · · · · · · · · · · · · · · ·		-	
			
ESTION 3	remainder from a bank. The rep	payments a on, she paid	e pays a deposit of \$30 000 and borrows the state of \$1350 per calendar month. The loan is d in cash the following charges; governme = \$1345.
Calculate	the amount repaid to the bank.	b	Find the total cost of purchasing the land
Tograma ku Mir.			
		-	
Find the a purchase). Express t	his amount as a percentage of the
			

JNIT 8: TOPIC TEST

SECTION 1

Consumer arithmetic

nstructions for SECTION 1

- You have 15 minutes to answer Section 1
- Each question is worth 2 marks
- · Attempt ALL questions
- · Calculators are NOT to be used
- · Fill in only ONE CIRCLE for each question

								Marks
1	6% of an amount is	\$300	. The amount is	_		,		
	(A) \$18	$^{\odot}$	\$50	(C)	\$1800	(D)	\$5000	2
2	$\frac{4}{5}$ of \$7.75 equals							,
	(A) \$1.55	$^{\odot}$	\$6.02	©	\$6.20	①	\$31.00	2
3	300% of 5 is							
	(A) 15	$^{\circ}$	10	©	$\sqrt{10}$	①	$2\sqrt{5}$	2
4	40 empty cans wei \$100?	gh 1 k	kg and are sold f	or 25	cents. How ma	ny ca	ans can be sold for	
	(A) 8000	$^{\circ}$	12 000	©	16 000	D	20 000	2
5	One Australian do	llar is	equal to 210 Jap	oanes	se yen. How ma	ny de	ollars are equal to	}
	A 12 cents	$^{\circ}$	\$80.95	©	\$8.10	\bigcirc	\$12.35	2
6	\$500 invested for 2	year:	s at 10% simple	inter	est p.a. becomes	3		
	(A) \$550	$^{\circ}$	\$600	©	\$625	D	\$650	2
7	A dealer sells an a	rticle	for \$25 and mak	es a	profit of \$5. His	perc	entage profit is	
	(A) 15%	$^{\circ}$	20%	_	25%	①	30%	2
8	\$2000 invested for	2 yea	rs at 10% comp	ound	interest become	es		
	(A) \$2400	B	\$2420	_	\$2666	①	\$5000	2
9	\smile	s to b	e paid in equal	insta	lments of \$45.20	. Ho	w many instalments	-
	(A) 8	$^{\circ}$	10	©	12	\odot	14	2
0	Kate is paid \$9.50 every extra hour v	per h vorke	our for the first od. How much is	36 ho she	ours and is paid paid for 41 hou	time rs?	-and-a-half for	
	(A) \$389.50	$^{\circ}$ B	\$413.25	©	\$460.75	\odot	\$584.25	2

Total marks achieved for SECTION 1

UNIT 8: TOPIC TEST

SECTION 2

Consumer arithmetic

Instructions for SECTION 2

- · You have 20 minutes to answer ALL of Section 2
- · Each question is worth 2 marks
- Attempt ALL questions
- · Calculators may be used

	Ougations		
_	Questions	Answers	Marks
1	Find John's weekly wage if he works for 38 hours at the rate of \$15.60 per hour.		2
2	Find the simple interest on \$8000 at 8% p.a. for 3 years.		2
3	Find the rate per cent if a principal of \$4000 yields interest of \$960 in 3 years.		2
4	Find the compound interest on \$6000 for 6 years at 6% p.a.		2
5	Find the total amount when \$53 000 is invested at 9% p.a. for 5 years if the interest is compounded quarterly.		2
6	A T.V. costs \$5000 and depreciates at the rate of 18% p.a. Find its value after 5 years.		2
7	A new machine that costs \$15 000 depreciates at the rate of 20% p.a. Calculate its value after 3 years.		2
8	At what rate should \$5600 be invested to earn an interest of \$1176 in 3 years?		2
9	A landlord charges an annual rent of \$13 920. Find the monthly rent.		2
10	The annual salary of a person is \$54 600. Find his weekly income.	·	2
11	An article marked \$175 was sold for \$125. What was the percentage discount?		2
12	What is the simple interest on \$2500 at 6% p.a. for 7 months?	·	2
13	Which is the best buy: 1 kg for \$3.60, 500 g for \$2.10, 300 g for 89 cents or 750 g for \$2.30?		2
14	An article costing \$60 is sold at a loss of 20% of the cost price. Find the selling price.		2
15	A credit card company charges 0.05753% interest per day. Find the interest charged in 4 weeks on a balance of \$900.		2

Answers

- PAGE 1 1 a \$512 b \$15.75 2 a i \$16.80 ii \$201.60 iii 6 hours b i \$5040 ii \$882 iii \$5922 iv \$1776.60 c \$1609.88
- PAGE 2 1 a \$2808 b \$520 c \$937.50 d \$1213.33 e \$164.38 f \$205.48 g \$200 h \$126 i \$180.82 j \$517.81 2 a 12.5%
- b \$12 500 c 3 years

 PAGE 3 1 a \$1381.41 b \$8277.49 c \$1996.80 d \$16 226.60 e \$1350.82 f \$7476.79 2 a \$89 018.14 b \$102 891 c \$10 720.77 d \$24 459.20
- PAGE 4 1 a \$11 220.20 b \$13 629.44 c \$3581.96 d \$2430 2 a i \$40 960 ii \$39 040 b \$18 841.60 c \$81 288.42 d 7 years
- PAGE 5 1 a \$2850 b \$12000 c 8% p.a. d \$86259.66 e \$15315 f \$1885748 g \$209715.20
- PAGE 6 1 a \$8000 b \$466.67 2 a \$600 b \$2400 c \$1080 d \$3480 e \$96.67 3 a \$14780 b \$246.33 c 18.9%
- PAGE 7 1 a \$60 000 b \$32 400 c \$2400 2 a \$305 000 b \$4600 3 a \$162 000 b \$196 345 c \$46 345, 23.6%
- PAGE 8 1 D 2 C 3 A 4 C 5 C 6 B 7 C 8 B 9 C 10 B
- PAGE 9 1 \$592.80 2 \$1920 3 8% p.a. 4 \$2511.11 5 \$82 706.99 6 \$1853.70 7 \$7680 8 7% p.a. 9 \$1160 10 \$1050 11 28.579 12 \$87.50 13 300 g for 89 cents 14 \$48 15 \$14.50