

NUMERACY

Skills Development Booklet

VM
3&4

i. Contents

1. Happy Hol's	1
2. My World of Numbers	2
3. Addition and Subtraction	4
4. Multiplication and Division	6
5. Numbers and Words	8
6. Order, Order.....	10
7. Bits and Pieces	12
8. Shapes and Objects.....	14
9. Time is Time	18
10. It Takes Time.....	20
11. Using My Time.....	22
12. Measuring Up	24
13. On The Floor.....	26

ii. Progress Record

14. You Are What You Eat.....	28
15. Dealing With Information.....	30
16. A Piece of Pie	32
17. Working With Graphs	34
18. What's the Chance?.....	38
19. Money.....	40
20. Time is Money	42
21. Managing Money	44
22. Have and Have Not	46
23. Occupational Wages.....	48
24. This and That.....	50
25. Numerical Problem Solving ...	52
Reflection and Review	54

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VCE/VM Units 1&2: From 2023

- ⇒ Literacy VM 1&2: Coursebook & Applied Vocational Booklet
- ⇒ Numeracy VM 1&2: Coursebook & Skills Development Booklet
- ⇒ Personal Development VM 1&2: Coursebook & Applied Vocational Booklet
- ⇒ Work Related Skills VM 1&2: Coursebook & Applied Vocational Booklet

VPC Units 1&2: From 2023

- ⇒ Literacy VPC 1&2: Coursebook & Applied Vocational Booklet
- ⇒ Numeracy VPC 1&2: Coursebook & Skills Development Booklet
- ⇒ Personal Development VPC 1&2: Coursebook & Applied Vocational Booklet
- ⇒ Work Related Skills VPC 1&2: Coursebook & Applied Vocational Booklet

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VCE/VM Units 3&4: From 2024

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- ⇒ Work Related Skills VPC 3&4: Coursebook & Applied Vocational Booklet

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Topic	Skills Development		Advanced		Applied	
	p.	Done? Date	p.	Done? Date	p.	Done? Date
1 Happy Hol's	1	<input type="checkbox"/> <input type="checkbox"/>	1	<input type="checkbox"/> <input type="checkbox"/>	1	<input type="checkbox"/> <input type="checkbox"/>
2 My World of Numbers	2	<input type="checkbox"/> <input type="checkbox"/>	3	<input type="checkbox"/> <input type="checkbox"/>	3	<input type="checkbox"/> <input type="checkbox"/>
3 Addition and Subtraction	4	<input type="checkbox"/> <input type="checkbox"/>	5	<input type="checkbox"/> <input type="checkbox"/>	5	<input type="checkbox"/> <input type="checkbox"/>
4 Multiplication and Division	6	<input type="checkbox"/> <input type="checkbox"/>	7	<input type="checkbox"/> <input type="checkbox"/>	7	<input type="checkbox"/> <input type="checkbox"/>
5 Numbers and Words	8	<input type="checkbox"/> <input type="checkbox"/>	9	<input type="checkbox"/> <input type="checkbox"/>	9	<input type="checkbox"/> <input type="checkbox"/>
6 Order, Order	10	<input type="checkbox"/> <input type="checkbox"/>	11	<input type="checkbox"/> <input type="checkbox"/>	11	<input type="checkbox"/> <input type="checkbox"/>
7 Bits and Pieces	12	<input type="checkbox"/> <input type="checkbox"/>	13	<input type="checkbox"/> <input type="checkbox"/>	13	<input type="checkbox"/> <input type="checkbox"/>
8 Shapes and Objects	14-15	<input type="checkbox"/> <input type="checkbox"/>	16	<input type="checkbox"/> <input type="checkbox"/>	17	<input type="checkbox"/> <input type="checkbox"/>
9 Time is Time	18	<input type="checkbox"/> <input type="checkbox"/>	19	<input type="checkbox"/> <input type="checkbox"/>	19	<input type="checkbox"/> <input type="checkbox"/>
10 It Takes Time	20	<input type="checkbox"/> <input type="checkbox"/>	21	<input type="checkbox"/> <input type="checkbox"/>	21	<input type="checkbox"/> <input type="checkbox"/>
11 Using My Time	22	<input type="checkbox"/> <input type="checkbox"/>	22	<input type="checkbox"/> <input type="checkbox"/>	22-23	<input type="checkbox"/> <input type="checkbox"/>
12 Measuring Up	24	<input type="checkbox"/> <input type="checkbox"/>	25	<input type="checkbox"/> <input type="checkbox"/>	25	<input type="checkbox"/> <input type="checkbox"/>
13 On The Floor	26	<input type="checkbox"/> <input type="checkbox"/>	26	<input type="checkbox"/> <input type="checkbox"/>	27	<input type="checkbox"/> <input type="checkbox"/>
14 You Are What You Eat	28	<input type="checkbox"/> <input type="checkbox"/>	29	<input type="checkbox"/> <input type="checkbox"/>	29	<input type="checkbox"/> <input type="checkbox"/>
15 Dealing With Information	30	<input type="checkbox"/> <input type="checkbox"/>	31	<input type="checkbox"/> <input type="checkbox"/>	31	<input type="checkbox"/> <input type="checkbox"/>
16 A Piece of Pie	32	<input type="checkbox"/> <input type="checkbox"/>	33	<input type="checkbox"/> <input type="checkbox"/>	33	<input type="checkbox"/> <input type="checkbox"/>
17 Working With Graphs	34-36	<input type="checkbox"/> <input type="checkbox"/>	37	<input type="checkbox"/> <input type="checkbox"/>	37	<input type="checkbox"/> <input type="checkbox"/>
18 What's the Chance?	38	<input type="checkbox"/> <input type="checkbox"/>	39	<input type="checkbox"/> <input type="checkbox"/>	39	<input type="checkbox"/> <input type="checkbox"/>
19 Money	40	<input type="checkbox"/> <input type="checkbox"/>	41	<input type="checkbox"/> <input type="checkbox"/>	41	<input type="checkbox"/> <input type="checkbox"/>
20 Time is Money	42	<input type="checkbox"/> <input type="checkbox"/>	43	<input type="checkbox"/> <input type="checkbox"/>	43	<input type="checkbox"/> <input type="checkbox"/>
21 Managing Money	44	<input type="checkbox"/> <input type="checkbox"/>	45	<input type="checkbox"/> <input type="checkbox"/>	45	<input type="checkbox"/> <input type="checkbox"/>
22 Have and Have Not	46	<input type="checkbox"/> <input type="checkbox"/>	47	<input type="checkbox"/> <input type="checkbox"/>	47	<input type="checkbox"/> <input type="checkbox"/>
23 Occupational Wages	48	<input type="checkbox"/> <input type="checkbox"/>	49	<input type="checkbox"/> <input type="checkbox"/>	49	<input type="checkbox"/> <input type="checkbox"/>
24 This and That	50	<input type="checkbox"/> <input type="checkbox"/>	51	<input type="checkbox"/> <input type="checkbox"/>	51	<input type="checkbox"/> <input type="checkbox"/>
25 Numerical Problem Solving	52	<input type="checkbox"/> <input type="checkbox"/>	53	<input type="checkbox"/> <input type="checkbox"/>	53	<input type="checkbox"/> <input type="checkbox"/>

Preview Sample:
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Skills Development

1. Welcome back from your last ever summer holidays as a secondary student. Did you enjoy them? List 5 things you did over the break using numerical language or concepts.

e.g. I used a fit tracker to record the number of kms I walked, jogged and ran. I registered 182 km walking, 120 km jogging and 22 km running.

Advanced

2. Make numerical estimates based on the following activities. Add on, or you know. Also explain if these patterns changed from a year ago, why, why not?

My time asleep

My time online

My time spent outdoors

Money I spent

Money I earned

--

Applied

What would be your ideal holiday at the end of Year 12? Why so?

How much would it cost? How will you be able to afford this?

2 My World of Numbers

Skills Development

1. What numerical skills have you developed over the last 12 months and in which areas do you still need to improve?

I got much better at _____

and I now find it easier to understand _____.

Through work-related activities I am now able to _____

as well as _____.

However, I still need to improve _____

and I just can't seem to understand _____.

A numerical skill I plan to develop is _____.

2. Briefly describe 5 numeracy-related tasks that you can be relied upon to do well and for which you deliver good quality outcomes. These are your numerical competencies.

i. **Do not copy**

ii. _____

iii. _____

iv. _____

v. _____

Advanced

1. Complete these numerical calculations related to you. Add 3 more.
2. You also did this task last year. Record any changes and briefly outline why these changes occurred.

1. My height in cm is:	11. Number of mobiles I have owned is:
2. My weight in kg is:	12. Amount of income I have earned this month is:
3. My age in days is:	13. Number of Facebook friends I have is:
4. People in my extended family is:	14. Number of movies I watch in a month is:
5. Number of dwellings I have lived in is:	15. Number of people in my contacts list is:
6. Average hours I sleep per week is:	16. Number of days of school I have left is:
7. Average kms I walk per week is:	17. Weekly hours of paid work I'd like to do:
8. Time I spend daily in front of screens is:	18.
9. Leader driving hours I have accumulated is:	19.
10. Amount I need to save for my first car is:	20.

Preview Sample:
Do not copy

Applied

1. Make **estimates** based on the following activities you did this week. Add 4 of your own.
2. Make **comparisons** based on your likely activities in a year from now.

Activity	This week	In a year's time.
My time asleep.		
My time online.		
My time outdoors.		
Money I spent.		
Money I earned.		

3 Addition and Subtraction

Skills Development

Complete these calculations. When finished, check your answers using a calculator.

a. $44 + 15 - 15 =$	b. $54 + 64 - 45 =$	c. $11 + 14 + 45 - 12 =$
d. $84 + 145 - 54 =$	e. $54 - 44 + 154 =$	f. $\begin{array}{r} 46 \\ + 45 \\ - 44 \\ \hline \end{array}$
g. $165 + 86 - 16 - 24 =$	h. $10 + 40 + 60 - 190 - 10 =$	i. $\begin{array}{r} 150 \\ - 145 \\ + 60 \\ \hline \end{array}$
j. $5 + 5 + 4 + 6 + 5 - 6 =$	k. $264 + 556 - 441 - 81 =$	l. $\begin{array}{r} 914 \\ - 124 \\ - 99 \\ \hline \end{array}$
m. $114 + 115 - 25 - 8 - 4 - 5 =$	n. $558 + 454 - 240 - 70 =$	o. $154 - 154 + 105 - 88 =$
p. $10,000 + 4,000 - 500 =$	q. $17,500 - 450 + 1450 - 45 =$	r. $500 - 80 - 80 - 45 - 65 =$
s. $\frac{3}{4} + \frac{6}{8} =$	t. $\frac{15}{2} + \frac{2}{5} + \frac{6}{8} =$	u. $\frac{4}{8} - \frac{2}{8} - \frac{1}{4} =$
v. $\frac{7}{2} + \frac{5}{4} - \frac{2}{4} =$	w. $24.50 - 15.65 + 19.95 =$	x. $950 - 66/3 + 5.5 =$

Preview Sample:
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Advanced

Complete these calculations. When finished, check your answers using a calculator.

a. $77 - 79 - 2 - 6 + 16 - 25 =$	b. $2000 - 330 - 550 - 900 + 770 =$	c. $2.5 - 1.5 + 7.5 - 2.5 =$
d. 250 people arrive at the festival. 20 leave in hour 1, 35 in hour 2 & 80 in hour 3. 17 more arrive for hour 2 and 43 for hour 3. How many people there now?	e. Sadie has made 50 cupcakes for the party. Inkz eats 10, Lola 5, Turlough 5 and Maisie 5. All take home 4. How many cupcakes left?	f. Bo is making vegan burgers. Each 10 requires 1.5kg of 'mince'. After starting with 8kg, how much is left after making 50?

Preview Sample:

Applied

Do not copy

- a. You start out with \$300. You earn \$500 next week and spend \$375. You earn \$450 the week after and spend \$800. You earn \$500 the week after that and spend \$625. You get no shifts in the final week but spend \$150. What amount do you have left?
- b. What will you do if you stop getting any shifts to earn your income? Why?
- c. How can a budget help you keep track of your ongoing personal income and spending?
- d. What digital tools and apps can help you with personal budgeting? Do they work?

4 Multiplication and Division

Skills Development

Complete these calculations. When finished, check your answers using a calculator.

a. $18 \times 10 =$	b. $80 \times 8 =$	c. $6 \times 8 \times 4 \times 9 =$
d. $418 \times 3 =$	e. $80 \times 40 \times 3 =$	f. $80 \times 40 \times 30 =$
g. $18 \times 18 \times 11 =$	h. $100 \times 40 \times 14 \times 2 =$	i. $90 \times (15 \times 15) =$
j. $660 \div 30 =$	k. 128 times 10 =	l. $\begin{array}{r} 28 \\ \times 8 \\ \hline \end{array}$
m. $180 \div 3 =$	n. $180 \div 2 =$	o. $800 \div 20 =$
p. $57 \div 3 \div 8 =$	q. $80 \div 5 \div 2 =$	r. $9,000 \div 20 \div 10 =$
s. 1,000 divided by 10	t. 1,000 divided by 20	u. 6,400 divided by 64
v. 80 divided by eighty	w. One million how many fives	x. 10 into 200

Preview Sample:
Do not copy

Advanced

Complete these calculations. When finished, check your answers using a calculator.

a. $24 \div 6 \times 40 =$	b. $8 * 8 \times 7 \div 4 =$	c. $64 * 10 \div 4 \div 4 =$
d. $15 \times 16 \times 11 =$	e. $27 \div 3$ times $10 =$	f. $(10 * 50) \div (50 * 4) =$
g. $70 \div 7 \times 11 \times 45 =$	h. $18 * 17 \div (2 \times 100) =$	i. $70 * (15 \times 20) * 5 =$
j. $2/4 \times 1/2 =$	k. $6/4 \times 2/3 =$	l. $7/4 \times 3/8 =$
m. A jogger runs 6 km per day, 5 times a week. Total km in 3 months?	n. 100 people pay gym fees of \$25/month. They do this for a year. Total?	o. A cat runs up and down 18 stairs 50 times a day. How many stairs in a week?

Preview Sample:
Do not copy

Applied

Investigation: Digital drains

As you know, digital subscriptions can quickly add up and consume a large portion of your weekly income. And many 'hide' forgotten in the background, taking a little chunk out of your bank account every week or month.

- What digital subscriptions do you have? What about your family?
- Have you ditched any in the last year, or taken up any new services?
- Estimate how much you, and/or your family, spend on digital subscriptions.
- Research and calculate the actual amounts. Work out the annual expenses, monthly expenses, the weekly expenses and the daily expenses.
- Do you need all these services and this much data? Why/why not?
- Are there subscriptions that are no longer needed? Explain
- Is there any duplication of services that might be able to be combined? Explain.
- Can you switch or make changes to save money and/or improve service?

5 Numbers and Words

Skills Development

The ability to recognise, speak and write numbers in words is a vital task in personal (helping others), social (planning activities) and work-related situations (dealing with orders and payments). Write the following numbers in words.

	Number	Words
1.	2,500	
2.	383.7	
3.	54,300	
4.	-67	
5.	2,644	
6.	22,225	
7.	20K	
8.	2,000,000	
9.	5,000,000,000	
10.	215,176	
11.	\$99.60	
12.	4.5km	
13.	\$2,298.67	
14.	156,600	
15.	\$2.43m	
16.	02/05/2024	
17.	45° ENW	
18.	22:34am	
19.	0.565	
20.	38.5mg	
21.	17m and 45cm	
22.	6 hours and 35 min	
23.	2,000 kg	
24.	37.4°	
25.	-\$1.5m	

Preview Sample:
Do not copy

Advanced

Complete these calculations. When finished, check your answers using a calculator.

<p>a. Sam did fifty sit-ups every day in March.</p>	<p>b. Sami ate a Mars Bar at lunchtime every day for the school year.</p>	<p>c. Van skates twenty minutes each way to and from school. On VET days Van has to skate 33 per cent more.</p>
<p>d. Brawn bought twelve Whoppers for a party. Total cost in \$?</p>	<p>e. Jinx ordered three and a quarter dozen pies and thirty pasties for a party. Total?</p>	<p>f. Minx reduced his daily 18,000 thousand kilojoule intake by a third.</p>

Preview Sample:

Applied

- List 5 numerical achievements you have achieved in a sporting or hobby activity.
e.g. My most goals kicked in footy was when I kicked 11.3 in 2024.
- But numbers on their own don't always mean too much. You need to add some more information to provide context. Consider these 2 examples.
e.g. 1 My most goals kicked in footy was when I kicked 11.3 in 2024.
(against my five-year old sister in the backyard.)
e.g. 2 e.g. My highest goals kicked in footy was when I kicked 11.3 in 2024.
(against Rainbow in the grannie when playing in the 2nds.)

Add extra information to provide the context why each of yours was an achievement.

6 Order, Order

Skills Development

Complete these calculations. When finished, check your answers using a calculator.

a. $9 + 3 \times 7 + 28 =$	b. $8 * 9 + 9 \times 5 =$	c. $20 + 20 \times 20 / 6 =$
d. $230 * 20 - 60 =$	e. $86 - 30 * 26 - 36 =$	f. $6 \times 26 + 30 * 9 =$
g. $260 / 4 + 36 + 90 =$	h. $260 \times 4 + 36 + 90 =$	i. $260 + 4 + 36 \times 90 =$
j. $23 - 27 - 5 \times 28 =$	k. $20 * 26 + 40 * 36 =$	l. $19 \times 6 - 3 \times 6 =$
m. $376 - (8 \times 9) \times 5 - 3 =$	n. $3 \times 20 + (80 \times 20) - 6 =$	o. $60 \times 60 - 60 \times 60 =$
p. $260 / 6 + (9 \times 33) \times 20 =$	q. $360 \div 30 + (7 \times 20) \times 26 =$	r. $660 - 454 + (27 * 7) - 96 =$
s. $2/3 \times 5/6 - 3/6 \times 3 =$	t. $2.6 \times 8.6 - 5.36 \times 3 =$	u. $8,000 \div 3.6 \times 3/2 =$

Preview Sample:
Do not copy

Advanced

Calculate the answers for each of these situations using the correct order of operations.

<p>a. You have 8 groups of 5 trainees, you add 10 more and then split them into 5 groups. How many per group?</p>	<p>b. You earn \$65 a day for a week, but spend \$300. You then earn another \$95 for 3 days running. How much do you have?</p>	<p>c. A customer buys 16 shirts at \$50 each and 8 ties at \$12.50 each. He wants to pay in 4 equal instalments.</p>
<p>d. 50 fish weigh 25kg in total. You take out the 5 biggest which removes 7kg. What is the average weight of those left?</p>	<p>e. Each wedding dress requires 2.5m of cloth + $\frac{1}{2}$ metre for hems and seams. How many metres for 4 outfits?</p>	<p>f. You have 1,000 Skittles for 13 people at the party. But an extra 2 people turn up. How many for each?</p>

Preview Sample:

Do not copy

Applied

Applying the correct order of operations is very important when dealing with financial transactions involving multiples of different amounts.

- If you work for 26 weeks doing 38 hours a week at \$20 per hour, and 26 weeks doing 38 hours at \$25, how much would you earn? Estimate the amount:
- Use order of operations to calculate the amount.
- So if you are working next year how much might you earn for the entire year? Use order of operations to calculate this likely amount.
- If you buy 2 sausage rolls at \$5 and 2 soft drinks at \$4 over the course of each working day how much will you spend:
 - per day?
 - per work week?
 - per year?
- How can you cut your own 'costs' of working?

7 Bits and Pieces

Skills Development

Complete these calculations. When finished, check your answers using a calculator.

a. Express as a fraction: $0.125 =$	b. Express as a fraction: $0.25 + 0.65 =$	c. Express as a fraction: $0.70 - 0.25 + 0.05 =$
d. Express as a percentage: $0.575 =$	e. Express as a percentage: $0.275 + 0.628 =$	f. Express as a percentage: $0.083 - 0.22 + 0.559 =$
g. Express as a decimal: $7 \text{ and } 5/8 =$	h. Express as a decimal: $8/3 \times 1/6 =$	i. Express as a decimal: $5/10 - 2/5 + 1/4 \times 1/2 =$
j. Calculate percentage: 25% of \$875 =	k. Calculate percentage: 17.5% of \$15,000 =	l. Calculate percentage: 42.5% of \$180,000 =
m. Calculate and show as a decimal and percentage: $3/9 + 3/18 + 1/4 =$	n. Calculate and show as a decimal and percentage: $7/11 + 18/22 - 3/4 =$	o. Calculate and show as a decimal and percentage: $0.59 + 5/8 - 0.33 =$
p. Calculate amounts: Discount of 12.5% on 6 purchases of \$50.	q. Calculate amounts: Discount of 5% on 20 purchases of \$99.95.	r. Calculate amounts: Discount of 40% on 1,000 purchases of \$300.
s. Calculate amounts: Penalty fee of 20% on \$350.	t. Calculate amounts: Late fee of 7.5% on \$15,000.	u. Calculate amounts: Penalty rate on pay of 25% for 4 hours at \$22, and 50% for a further 2.5 hours.
v. $7.5 + 50\%$	w. $1/4 \times 50\% =$	x. $50 \times 1/4 =$

Preview Sample:
Do not copy

Advanced

Calculate the following based on percentages, decimals and fractions.

a. $1/2 + 1/4 =$	b. $1/4 + 2/8 =$	c. $1/2 + 1/3 =$	d. $1/8 + 1/4 + 1/8 =$
e. $1/2 + 0.65 =$	f. $0.25 + 1/2 =$	g. $0.1 + 0.35 + 2/3 =$	h. $0.6 + 1/8 - 0.1 =$
i. $2/3 \times 1/3 =$	j. $4/9 \times 9/4 =$	k. $3/4 \div 1/2 =$	l. $7/2 \div 2 =$
m. 10% of 400 =	n. 10% of 1000 =	o. 5% of 750 =	p. 40% of 44.10 =
q. 20% of \$500 =	r. 75% of \$18,000 =	s. 15% of \$190 =	t. 20% of \$9.11 =

Preview Sample:
Do not copy

Applied

- a. Micki loves Smarties. She buys a bulk lot online, counts out 20, and will eat these evenly over the next 30 days. What fraction, decimal and percentage will she eat per day? How many different flavours is she likely to eat? How much might these cost?
- b. Murphy loves homemade chips. He buys 5kg of spuds, peels them and cuts them into thick chips. He has 7 mates coming over in an hour and wants to share these evenly. In your work folios calculate the fraction, decimal and % to be shared between them; and the weight. Estimate the total cost per person.
- How many chips do you estimate this will be? How many batches will he have to fry up to cook 5kg? How long might this take? How much oil will he use up? Estimate the cost per person.

8 Shapes and Objects

Skills Development

1. Draw these common shapes. Add 3 more.

a. Square	b. Triangle	c. Circle
d. Rectangle	e. Oval	f. Diamond
g. Ellipse	h. Kite	i. Rhombus
j. Octagon	k. Hexagon	l. Oval
m. Pentagon	n. Hexagram	o. Isosceles triangle
p. Pentagram	q. Parallelogram	r. Crescent
s.	t.	u.

Preview Sample:
Do not copy

Skills Development

2. Turn each of those shapes into 3D objects. What are these objects called?

a.	b.	c.
d.	e.	f.
g.	h.	i.
k.	l.	m.
n.	o.	p.
q.	r.	s.
t.	u.	

Preview Sample:
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8 Shapes and Objects

Advanced

Describe the type of transformation that has been applied to the original objects.

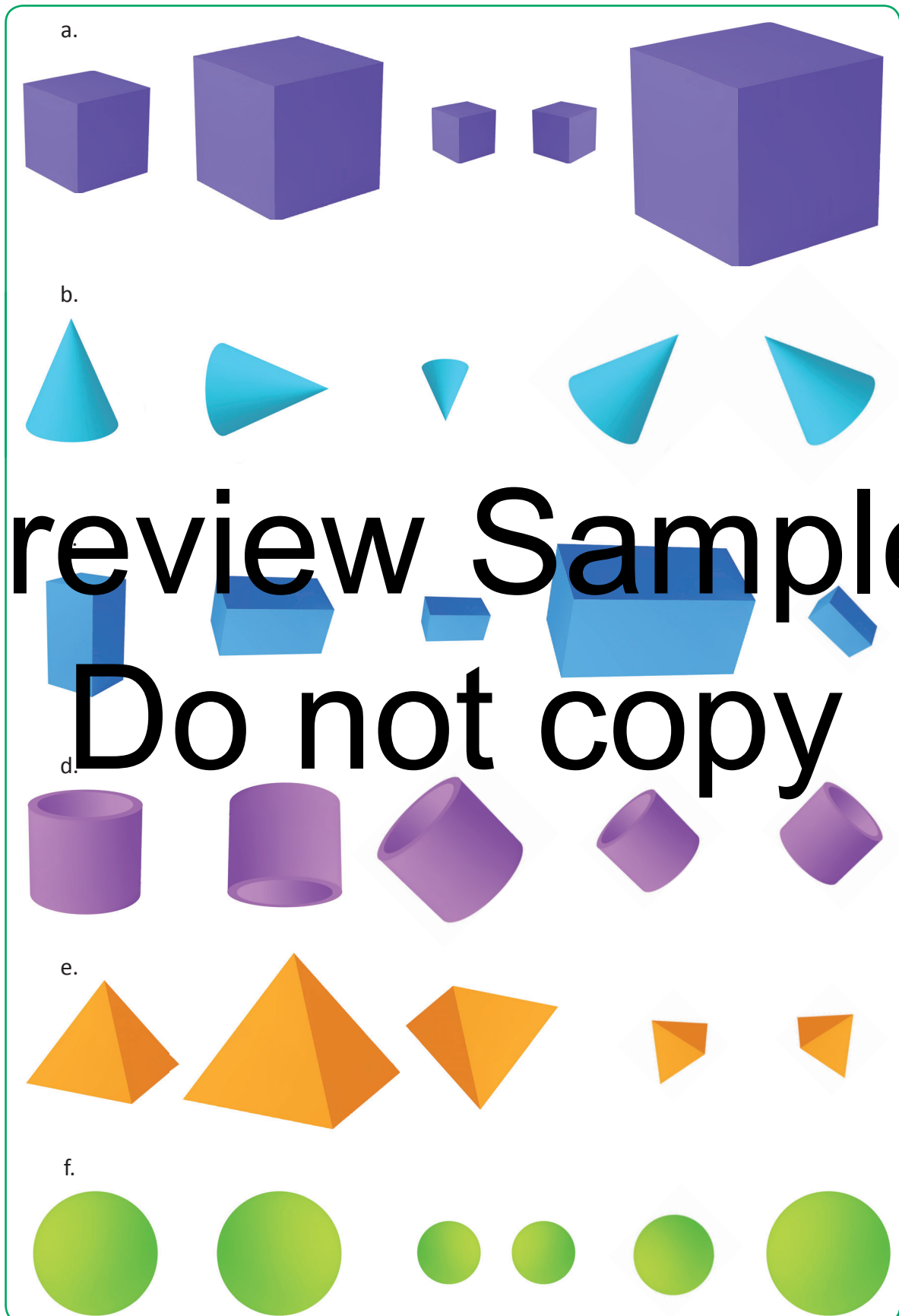


Image: yusufdemirci/Depositphotos.com

Applied

- a. Draw each of these terms, and describe an example of a personal or work-related situation whereby you might need to understand and apply these concepts.

Term	Drawing	Personal/work-related example
parallel		
perpendicular		
adjacent		
horizontal		
vertical		
symmetrical		
asymmetrical		

Preview Sample:
Do not copy

- b. Why are digital influencers often 'reversed' in their online image and video?

- c. Why are 'objects in the mirror closer than they appear'?

- d. Use basic shapes to sketch a concept vehicle. Consider rendering this by hand, by using software, or in 3D if you want to take it further.

9 Time is Time

Skills Development

Calculate how much **time has elapsed** for the following time spans. Make sure that you show appropriate workings out.

a. 7:30am to 11:30am	b. 4:45am to 11:45am	c. 5:30pm to 10:15pm
d. 6:30pm to 4:30am	e. 5:30am to 4:30pm	f. 11:45am to 2:30am
g. 7:15am to 2:25pm	h. 9:15pm to 2:30am	i. 9:30pm to 8.28am
j. 07:30 to 15:45	k. 06:45 to 22:30	l. 07:45 to 19:15
m. 02:00 to 15:00	n. 06:07 to 18:47	o. 09:03 to 13:50
p. 50 minutes in seconds	q. 2 fortnights in days	r. 5 and a half hours in minutes
s. 2 half days in hours	t. 9 days & 3 half days in hours	u. 5 weeks in hours

Preview Sample:
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Advanced

Calculate the total time (**duration**) for the following situations.

<p>a. Shop is open 7 days a week: for 11 hours a day weekdays, and 8 hours daily on weekends. Total open hours?</p>	<p>b. Journey to Sydney starts 05:30; arrival at 20:00. Actual travel time was 10.5 hours. Total time and how much time in breaks?</p>
<p>c. 8 workers rostered on from 07:45 to 17:15 with a break of 1 hour each. What is the total time worked?</p>	<p>d. You work Mon 6 hours, Tues 8 1/2 hrs, Wed 8hrs 15 mins, Thurs 12 hours straight, and Friday from 7-11am and then from 1-6.45pm. How many hours worked and what % of a full week was spent working?</p>

Preview Sample:

Do not copy

Applied

- Assume you are working a full-time week in your preferred job next year. What is likely to be your regular hours of work? Where will you be working?
- Calculate the total time you will spend on your workday in this job. Include getting ready for work, travelling, hours worked and breaks.
- Now do the same based on being a 5-day part-timer working 4-hour shifts with no breaks. Where might you be working? Which do you prefer and why?

10 It Takes Time

Skills Development

1. When we travel places it takes us time, and costs money. Compare the following situations based on public transport travel, versus personal travel methods.
2. Explain which option you would take and why?

Situation	Time and cost by public transport	Time and cost: Personal // & method	Which option for you and why?
From your home to school.			
From your home to TAFE next year.			
From your home to your workplace next year.			
From your home to the doctors.			
From your city/town to your airport.			
From your home to your nearest bank branch.			
From your home to your nearest KFC.			
From your home to your besties place			
From your home to the MCG.			
From your home to The Opera House.			
From your city/town to Uluru.			

Preview Sample:
Do not copy

Advanced

Estimate how much time it would take to deal with these situations. Do some research and see how accurate your estimates were. Report back to the class.

<p>a. Make and serve 3 cappuccinos, 2 lattes and a soy decaf to a group of waiting customers.</p>	<p>b. Deliver 4 delivery meals to different friends who all order at the same time on your first day of work.</p>
<p>c. Assemble and cook 8 large pizzas (4 different varieties) for a customer order.</p>	<p>d. Organise your entire VCE cohort to line up by age from oldest to youngest.</p>
<p>e. Take lunch pre-orders from 20 teachers for a PS cultural day lunch each piece.</p>	<p>f. Wash, dry (if needed iron) and fold your work uniform outfits for the next week.</p>

Preview Sample:
Do not copy

Applied

As you know, a normal full-time working day will require a greater time commitment than a normal day at school. Create a timeline to show your school day now. Do this for when you are working full-time in the future. Analyse the difference and suggest problems you might have to overcome.

11 Using My Time

Skills Development

Now that you're in Year 12, what do you do with your time? Are you using it wisely?

1. Complete the timesheet on p.23 based on a normal school-term week.
2. Note down the times and duration of any activities you do during the week including:

- | | | | |
|-----------------------------------|--|-----------------------------------|--------------------------------------|
| <input type="checkbox"/> school | <input type="checkbox"/> sport | <input type="checkbox"/> sleeping | <input type="checkbox"/> socialising |
| <input type="checkbox"/> study | <input type="checkbox"/> structured activities | <input type="checkbox"/> music | and any other |
| <input type="checkbox"/> homework | <input type="checkbox"/> family/home | <input type="checkbox"/> TV | relevant activities. |
| <input type="checkbox"/> travel | duties | <input type="checkbox"/> gaming | |
| <input type="checkbox"/> work | <input type="checkbox"/> meals | <input type="checkbox"/> online | |

Advanced

3. Calculate the amount of leisure time you have per week this year, and then make estimates for a month and for the entire year. How has this changed compared to when you were in Grade 6?

Preview Sample:
Do not copy

Applied

4. Prepare a short written summary report, and deliver a brief oral presentation to the class, on what you do in your spare time.
5. Discuss what you might have to give up next year to balance work, study and your other (and new) responsibilities.

Weekly Timesheet (enlarge to A3)

Name: _____ Dates: _____

	Mon ___/___		Tue ___/___		Wed ___/___		Thur ___/___		Fri ___/___		Sat ___/___		Sun ___/___	
	Task done?	Time spent?	Task done?	Time spent?	Task done?	Time spent?	Task done?	Time spent?	Task done?	Time spent?	Task done?	Time spent?	Task done?	Time spent?
am														
12.01-1.00														
1.01-5.00														
5.01-6.00														
6.01-7.00														
7.01-8.00														
8.01-9.00														
9.01-10.00														
10.01-11.00														
11.01-12.00														
pm														
12.01-1.00														
1.01-2.00														
2.01-3.00														
3.01-4.00														
4.01-5.00														
5.01-6.00														
6.01-7.00														
7.01-8.00														
8.01-9.00														
9.01-10.00														
10.01-11.00														
11.01-12.00														
Daily time														

Signed: _____

Weekly Time duration: _____

Preview Sample:
Do not copy

12 Measuring Up

Skills Development



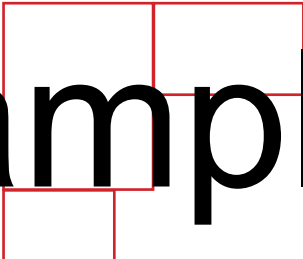
Calculate the following measurements in the correct units using the information provided. Make sure that you show appropriate workings out.

a. Perimeter of a square: 8cm	b. Perimeter of a rectangle: 18cm by 18cm	c. Perimeter of a rectangle: 16cm x 40mm
d. Perimeter of a rectangle: 2m by 180cm	e. Circumference of circle: Diameter = 28cm	f. Circumference of circle: Radius = 18cm
g. Area of a square: 8cm ²	h. Area of a square: 280mm ²	i. Area of a rectangle: 0.35m x 20cm
j. Area of a rectangle: 2.4m x 10mm	k. Area of a triangle: b = 8cm h = 8cm	l. Volume of a square: 5cm sides
m. Area of a rectangle: 1.4m x 300mm	n. Area of a circle: Diameter = 0.45m	o. Area of a circle: Radius = 2.0m
p. Volume of a square: 8cm ³	q. Volume of a rectangle: 15cm x 7cm x 26cm	r. Volume of a rectangle: 1m x 0.78m x 65cm
s. How many ml in 25 and 1/2 litres?	t. How many ml in 4 tablespoons?	u. How many litres in 8,800ml + 2.5l?
v. How many grams in 4.78 kg?	w. How many kgs in 25,750 grams?	x. How many kgs in 7.6 tonne?

Preview Sample:
Do not copy

Advanced

Calculate the following measurements in the correct units using the information provided. Make sure that you show appropriate workings out.

a. Circumference of a circle: Radius = 10cm	b. Circumference of circle: Diameter = 100cm	c. Circumference of circle: Radius = 3.5m
d. Area of a circle: Radius = 10cm	e. Area of a circle: Diameter = 100cm	f. Area of a circle: Radius = 3.5m
g. Total perimeter? (Image is to scale) 	h. Total perimeter? Each 'line' = 8.5m 	i. Total area? (Image is to scale) 

Preview Sample:

Applied

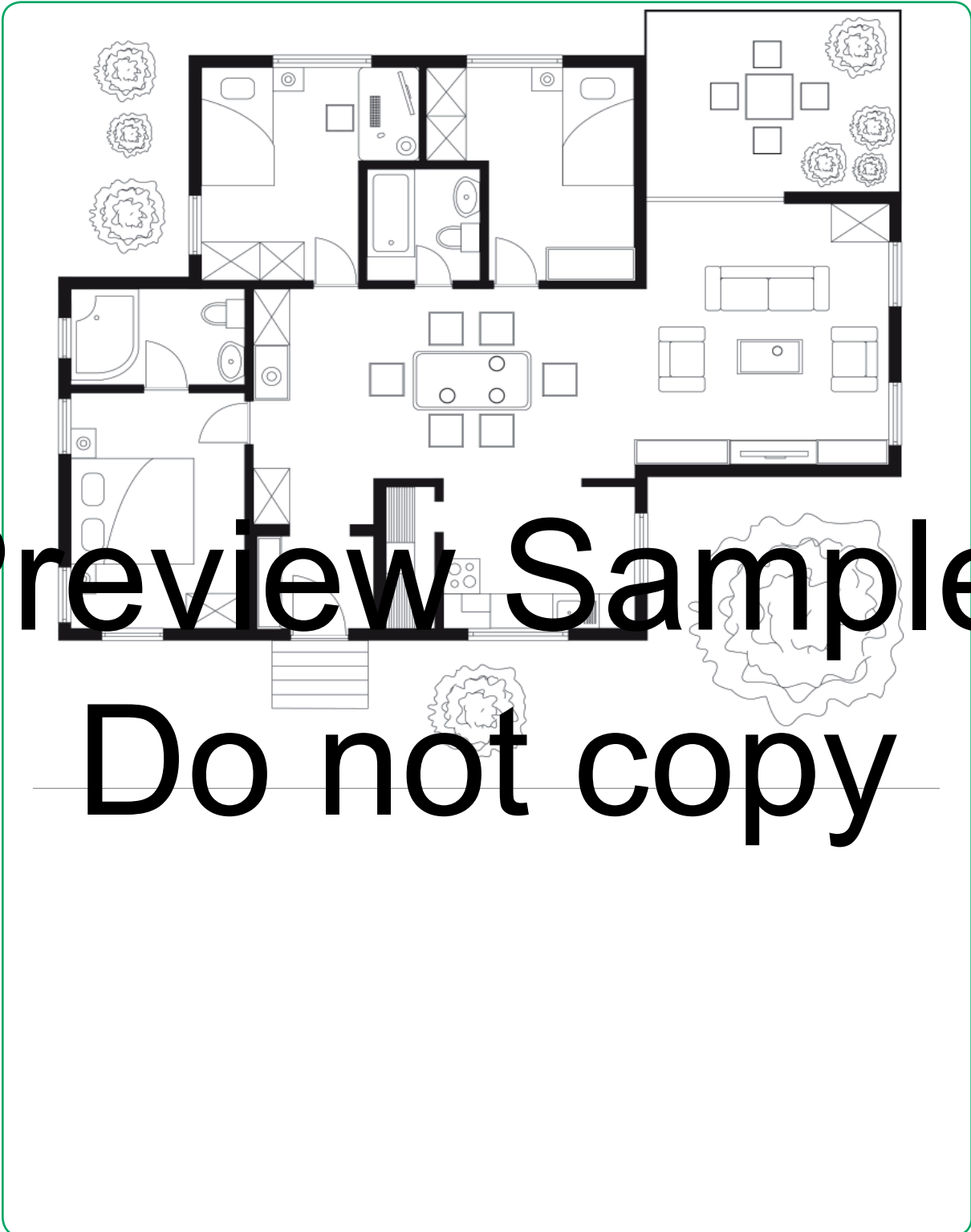
1. Choose an occupation in which you are interested. What types of measurements do workers need to do for their job? What units and conversions are involved?
2. What analogue tools and methods do they use? What digital tools and methods do they use?

Measurement	Units/Conversions	Analogue	Digital

13 On The Floor

Skills Development

Identify objects and fittings from this 2D diagram of a floorplan.



Preview Sample:
Do not copy

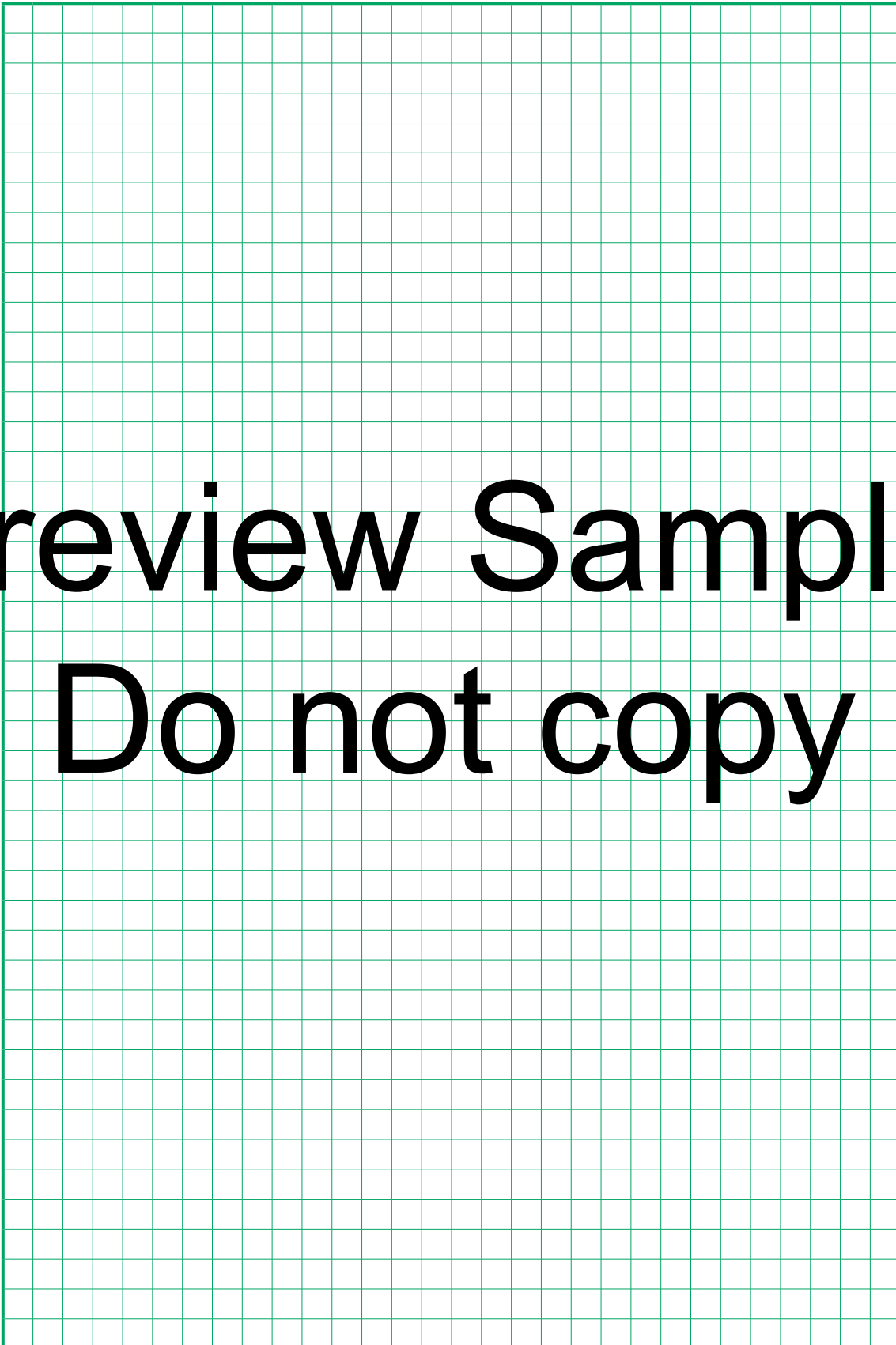
Image: delpieroo/Depositphotos.com

Advanced

Estimate and add the likely measurements of the block, the house, the rooms and the objects represented in the floorplan.

Applied

Sketch a floorplan of the house you'll be living in at aged 30. Make copies for a multi-story dwelling. Use correct symbols to make the floorplan more readable.



**Preview Sample:
Do not copy**

14 You Are What You Eat

Skills Development

You are you know! Draw equivalencies based on the following for a year's consumption.

1. The amount of candy you eat in equivalent bags of sugar.
2. The amount of soft drink you consume in equivalent litre bottles.
3. The amount of hot chips in equivalent 1kg bags of potatoes and litres of oil.
4. The amount of hamburgers in the proportion of a cow.
5. The amount of breads in equivalent 1kg bags of flour.
6. The amount of fruit in equivalent wheelbarrows.

Preview Sample:
Do not copy

Advanced

In your work folios, name the fruit and vegetables shown in this image. Rate them as part of your regular nutritional intake as 'regularly', 'sometimes', 'occasionally', 'rarely', 'never'.



Preview Sample:
Do not copy

Applied

When you are a new worker, it is likely that you will not be paid all that much. And if you are studying at TAFE, then you will also be short on cash. And your work/study days might be much longer than your current school hours. So you might get very hungry. A good way to save money is to bring your own lunch.

1. Estimate the cost of your current lunch (and other food and drinks during the school day) per day, per week and per (school) year. Who pays for these? Why?

2. Reflect on your most likely situation next year. Estimate the cost of your lunch (and other food and drinks during the work/study day) per day, per week and per year. Who will pay for these? How could you save money on your cost of food and drink?

15 Dealing With Information

Skills Development

A vital vocational numeracy skill is the ability to quickly identify and accurately organise data and numerical information. These skills are often assessed by pre-employment tests as part of the job application process.

1. Place an 'S' for same, or a 'D', for different for each of the following number pairs. Time = 5 mins.

- | | | | |
|----|---------------|---------------|-------|
| a. | 8647 | 8647 | _____ |
| b. | 4576 | 4567 | _____ |
| c. | 73476 | 73467 | _____ |
| d. | 47.867 | 47.867 | _____ |
| e. | 7248847 | 7248874 | _____ |
| f. | \$47.87 | \$471.87 | _____ |
| g. | \$732.76 | \$7322.76 | _____ |
| h. | 4778674 | 4778764 | _____ |
| i. | 98679343 | 9876432 | _____ |
| j. | 0.066 | 0.0066 | _____ |
| k. | 8.066 billion | 9.066 billion | _____ |
| l. | 77.867 x 4 | 77.867 x 4 | _____ |
| m. | 11 + 96 + 17 | 11 + 96 + 17 | _____ |
| n. | 060749470 | 064784770 | _____ |
| o. | 77 - 87 | 78 - 87 | _____ |
| p. | 467476 | 476476 | _____ |
| q. | 10 @ \$0.76 | 10 @ \$0.67 | _____ |
| r. | 2.502 | 2.502 | _____ |
| s. | 0.077mg | 0.077kg | _____ |
| t. | 14,006,848 | 14006848 | _____ |

2. Organise these 40 numbers in the correct order from lowest to highest.

Time = 15 mins

- | | | | |
|---------|--------|-------|---------|
| 198 | 1989.2 | 16516 | 5215 |
| 12152 | 1256 | 596 | 1365 |
| 1232165 | 65985 | 897 | 84589 |
| 454 | 6565 | 98 | 9874669 |
| 564654 | 148 | 98498 | 41696 |
| 0.8 | 79 | 4984 | 7256 |
| 4894 | 651 | 984 | 236 |
| 556 | 684 | 6321 | 7859 |
| 65 | 9874 | -98 | 123036 |
| 5432 | 123456 | 98798 | 99.389 |
1. _____
2. _____ 16. _____ 30. _____
3. _____ 17. _____ 31. _____
4. _____ 18. _____ 32. _____
5. _____ 19. _____ 33. _____
6. _____ 20. _____ 34. _____
7. _____ 21. _____ 35. _____
8. _____ 22. _____ 36. _____
9. _____ 23. _____ 37. _____
10. _____ 24. _____ 38. _____
11. _____ 25. _____ 39. _____
12. _____ 26. _____ 40. _____
13. _____ 27. _____
14. _____ 28. _____

Preview Sample: Do not copy

Advanced

3. Circle which of these calculations is higher, or lower, or circle both if the same.

Time = 30 mins.

a. 6×4	4×6	n. 10×50	60×9
b. 7×9	$50 + 3$	o. $1/2 + 1$	$1.5 - 0.1$
c. $25 - 17$	$9 - 2$	p. $0.7 * 5$	$4 - 0.4$
d. 6×4	12×2	q. $50 \times 1/2$	$1/4 \times 160$
e. 11×7	13×6	r. 12×12	11×13
f. $19 - 10$	$5 + 5$	s. $\$7 \times 5$	$\$30 + \7.50
g. $40/10$	$20 - 17$	t. $1m / 10$	$10,000 \times 10$
h. $100 + 50$	$75 + 85$	u. 20×1.5	40×1.25
i. 11×12	13×10	v. 10% of 450	20% of 250
j. 5×25	$100 + 25$	w. 25% of \$80	$4 \times \$19.99$
k. $17 - 10$	$23 - 15$	x. $6 \times 8 + 10$	$3 \times 11 - 6$
l. 10×36	$16 - 3$	y. 14×0	14×0
m. $1000 / 4$	$250 / 2$	z. $\$1,000 \times 10$	$\$10K$

Preview Sample:

Do not copy

Applied

Testing time

Find out pre-employment tests that are used for occupations you are interested in.

What numerical skills are these testing? Do some sample tests and see how you go.

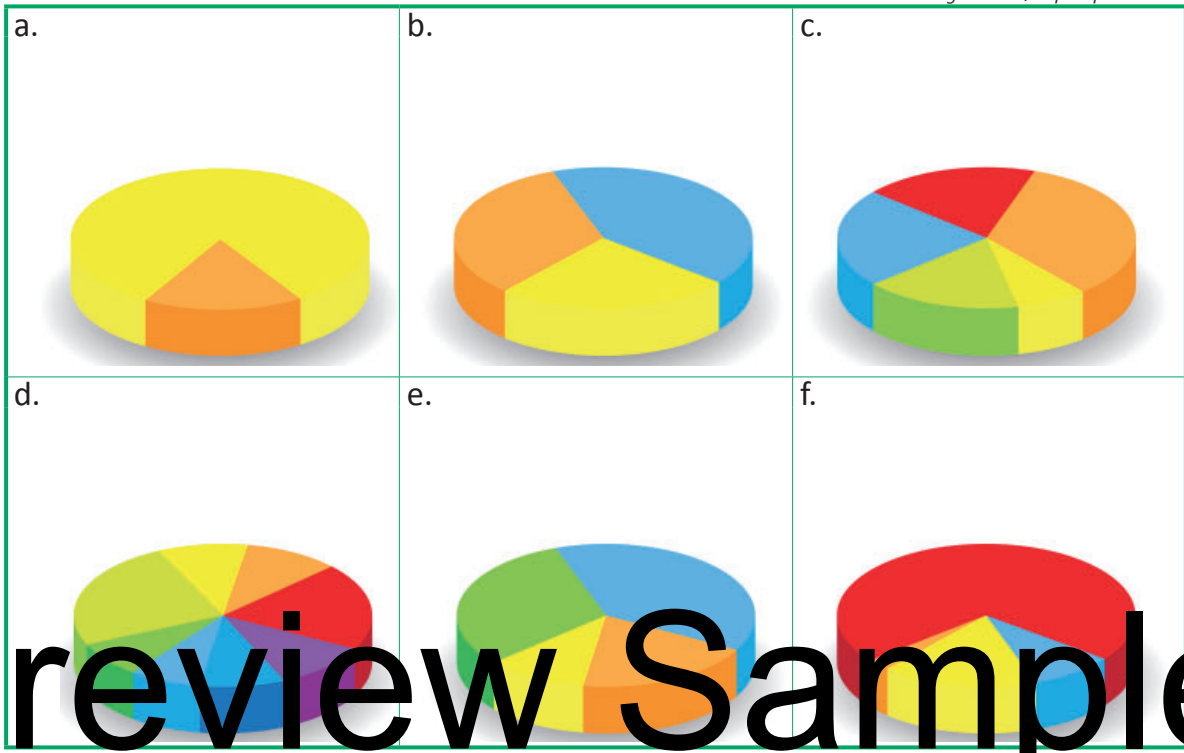
Occupation	Test/weblink	What are they testing?	How do I go?

16 A Piece of Pie

Skills Development

1. Estimate the percentage (%) represented by each piece (or portion) of the pie for these pie charts.

Image: i3alda/Depositphotos.com



Preview Sample:

2. Answer the following questions by identifying the most likely pie chart, together with a brief explanation of the reason for your choice.

<p>i. Which pie chart could be showing the response to a yes/no survey? What might be the question?</p>	<p>ii. Which pie chart has its largest portion of about 2/3? What might its 4 survey questions be?</p>	<p>iii. Which pie chart shows 2 large equal pieces and 6 small equal pieces. Estimate these percentages.</p>
<p>iv. Which pie chart might represent a 'good', 'average', 'poor' rating? Estimate the percentages and suggest a context.</p>	<p>v. Which pie chart might represent responses of a small 'high', 2 equal 'moderate' and 'fair', and a large 'poor'? What might be the question?</p>	<p>vi. Which pie chart has 5 portions? Estimate the percentages. How might this represent the post-Year 12 destinations of a VM class?</p>

Advanced

Construct a properly-labelled pie chart based on this information.

VM students' preferred main post-school outcome: Year 12 2024	
Work f-t	13
Work p-t/cas	7
Gap year	2
TAFE f-t	8
TAFE p-t	2
Other training	6
Other	2
Total	40

Preview Sample:

Applied

- Do not copy**
- Survey the class to find out your classmates' preference for their preferred main post-school outcome next year.
 - Create a table to collate the results.
 - Construct a properly-labelled pie chart based on this information.
 - For those who indicated 'working' as their preference, re-classify these results by 'apprenticeships', 'traineeships', 'other full-time' and 'other part-time/casual'.
 - Create a table to collate the results.
 - Construct a properly-labelled pie chart based on this information.
 - Survey the class to find out your classmates' preferred holiday destination to celebrate the end of year 12.
 - Create a table to collate the results.
 - Construct a properly-labelled pie chart based on this information.
 - Survey the teachers to find out where they holidayed at the end of their Year 12.
 - Create a table to collate the results.
 - Construct a properly-labelled pie chart based on this information.
 - Comment on the similarities and differences between these two cohorts.
 - What about you? Where do you fit into these pie charts? And why?

17 Working With Graphs

Skills Development

Bar graphs are a useful way of comparing different data sets using visual representation. They are often used for bills and when reporting business and financial results.

The amount should be plotted on the vertical or (y) axis and the time period and data sets plotted on the horizontal or (x) axis.

1. Construct a properly-labelled bar graph for Krang's Retro Toys that shows both total sales and total profit over the 5 years.
2. How can total sales go down, yet profit still rise? Explain carefully.
3. Based on the margins of 2022, and 2023, make an estimate of the profit for 2024. Explain your answer.

Krang's Retro Toys		
Total Sales and Net Profit: 2020-2024		
Year	Total sales	Net profit
2020	\$73,000	\$32,000
2021	\$114,000	\$43,500
2022	\$117,000	\$74,000
2023	\$95,000	\$67,000
2024	\$113,000	

Preview Sample:
Do not copy

Skills Development

Line graphs are a useful way to show time series data. They can include more than one graph on a set of axes. But you might have issues with this if the scales are mismatched.

The amounts should be plotted on the vertical or (y) axis and the time period plotted on the horizontal or (x) axis.

1. Construct a properly-labelled line graph for Krang's Retro Toys that shows both unit sales and cost of sales over the 5 years. You might need to use different scales.
2. Describe the trend in the data as shown by the graphs.
3. What has happened to Krang's total unit sales? But what has happened to his cost of sales? What does this suggest?
4. Is Krang's business heading in the right direction? What do you think?

Krang's Retro Toys Unit Sales and COGS: 2020-2024		
Year	Unit sales	Cost of sales
2020	2,150	\$26,000
2021	1,950	\$58,000
2022	1,200	\$27,000
2023	1,100	\$14,500
2024	950	\$18,850

Preview Sample:
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17 Working With Graphs

Skills Development

Pie charts show relative proportions of a whole. Each segment of the pie represents a %. You can also create some great 3D effects with pie charts

1. Construct properly-labelled pie charts for Krang's Retro Toys that show the proportional sales in each category for these 2 years. You'll need to calculate the relative % for each toy category.
2. Comment on the different patterns between the 2 years. What does this suggest? What has changed?

Krang's Retro Toys Item sales: 2020 & 2024				
Year	2020	%	2024	%
TMNT	211		94	
Lego	414		11	
WWE	236		94	
Star Wars	376		92	
MOTU	226		124	
Bionicle	75		101	
Smurfs	115		145	
Ponies	194		53	
Other	303		236	
Total	2,150	100	950	100

Preview Sample:
Do not copy

Advanced

1. Using all the data, summarise the performance of Krang's Retro Toys over 2020-2024.
2. Give any advice or recommendations.
3. What other data and information would be useful to know?

Preview Sample:
Do not copy

Applied

Pie charts are a good way to visually represent the size of relative proportions.

1. Draw a properly-labelled pie chart that shows the relative proportion of the manufacturer of the cars driven by teachers at your school. Record your data in your work folios. You might use checksheets to help you.
2. Draw another properly-labelled pie chart that shows the proportional age of the car based on when that model was released.
3. Draw another that shows the proportional colour of each car.
4. Go online and estimate the average current value of each car. Take into account age, and condition. Perhaps you might need to find out kms travelled.
5. Also research (as much as you can) how much each car might have cost to buy new when first released. Which type of cars hold their value better?
6. Apply the concepts of mean, median and mode to calculate appropriate averages.
7. Develop a brief summary report that 'profiles' the cars (or other vehicles) driven by the teachers at your school.

18 What's the Chance?

Skills Development

Complete these problems related to chance.

a. 1 in 3 chance in percentage?	b. 2 in 4 chance in percentage?	c. 1 in 8 chance in percentage?
d. 1 in 100 chance in percentage?	e. 7 in 100 chance in percentage?	f. 7 in 8 chance in percentage?
g. 33%: What are the odds?	h. 12.5%: What are the odds?	i. 50%: What are the odds?
j. 1%: What are the odds?	h. 99%: What are the odds?	l. 0%: What are the odds?
m. Odds of a head?	n. Odds of 2 tails in a row?	o. Odds of head then tail?
p. Odds of a red card from a deck?	q. Odds of a spade card from a deck?	r. Odds of an Ace card from a deck?
s. Odds of a black Jack card from a deck?	t. Odds of a red Queen card from a deck?	u. Odds of an Ace from a deck compared to a 2 card.
v. Which is a better chance? 4 in 4 or 3 in 4	w. Which is a better chance? 3 in 8 or 1 in 3	x. Which is a better chance? a third or 1 in 3

Preview Sample:
Do not copy

Advanced

Complete these problems related to probability.

a. Spinning 4 heads in a row.	b. Spinning 6 tails in a row.	c. Spinning a head and then 2 tails.
d. Rolling a 6 then a 1.	e. Rolling a pair of 6's.	f. Rolling 5 6's in Yahtzee?
g. Drawing 2 cards from a deck and getting 2 Kings.	h. Drawing 4 cards from a deck and getting 4 sevens.	i. Drawing 5 cards from a deck and getting 5 Aces.

Preview Sample:

Applied

Often life is about managing risk. But you should always remember that higher rewards = higher risk. Think very carefully before answering these statements.

a. If the stock market is averaging a 5% return, Bitcoin has gone up by 40% just in the last month, and your bank deposit is only giving you 3% interest, where should you invest your money? Why is that?

b. If the likelihood of winning Powerball is about 77 million to 1, then how does anyone ever win? Would you ever buy a ticket?

c. Why are people afraid of flying when driving or being a passenger are so much riskier? Do some research and compare the risks; and the ways to reduce risks.

19 Money

Skills Development

Complete these calculations. When finished, check your answers using a calculator.

a. $\$22.50 + \$24.99 =$	b. $\$11.50 \times 80 =$	c. $\$7.45 \times 3.5 - 10\% =$
d. $\$4\text{m} - \$2\text{m} + \$7,500 =$	e. $\$15.75 \times 25 + 10\% =$	f. $\$140 + \$99.99 - 25\% =$
g. $2.50 \times \$2.25 \times (2 \times 1.5) =$	h. $11^2 \times \$5.50 =$	i. $\$7,050 - \$2,025 \times 2.5 =$
j. $(\$4,125 - (\$27 \times 30)) \times 5\% =$	k. $\$1.2\text{m} \times 10 \div 10,000 =$	l. $25\% \times \$750 + 12\% \text{ of } \$750 =$
m. $(\$175 - \$27.50) \times 20 =$	n. $80 \times \$45 \div 12 =$	o. $25\% \times \$750 + 40\% \text{ of } \$600 =$
p. $200 \times \$6.50 + 10 \times \10.50	q. $15 \times \$17.25 + 10 \times \$15.75 + 5 \times 6.50 =$	r. $\$1,295 - \$296 - \$57 - \$3.50 \times 2 =$

Preview Sample:
Do not copy

Advanced

Complete these calculations. When finished, check your answers using a calculator.

<p>a. If you spend \$9.50 on lunch and \$5.50 on coffee every day, then how much per week, per month and per year?</p>	<p>b. If you earn \$120/week for 40 weeks and save 40%; and then \$480/week for 11 weeks and save 75%; total savings?</p>	<p>c. A customer orders 24 cans at \$2.50, 50 rolls at \$7.50 and 8kg of Frankfurts at \$9.50/kg. Total price after a discount of 7.5%?</p>
<p>d. After a day selling at the local market, you have 9 x 20s, 13 x 10s, 22 x 5s, 11 x 2s, 17 x 1s and \$8.65 in silver. Total?</p>	<p>e. What change is left from \$500 after 3 purchases of \$11.50, 10 of \$5, 3 of \$70 and 4 of \$19.99?</p>	<p>f. If you get paid \$17.50 an hour for 16 hours, plus double time for the next 16 hours, then how much in total?</p>

Preview Sample:
Do not copy

Applied

Working costs money. Travel, transport, work clothing or uniform, parking, lunch, coffee, tools of the trade, and other expenses depending on the job and the location.

- a. If you were working next year, how much would you spend each week on 'working'? How much of your pay might this eat up?

Studying also costs money. Fees, resources, study materials, transport, parking, lunch and other expenses depending on the course and the location.

- b. If you are studying next year, how much would you spend each week on this? How are you going to cover these expenses?

20 Time is Money

Skills Development

When you start a job you are usually paid a wage. If you work fewer hours per week than the standard 38-hour week as a part-time or casual employee, you should calculate an equivalent full-time weekly and annual pay rate. This way you can make a comparison on the relative income level associated with this job.

1. Calculate both the equivalent weekly and annual wage for each of the following.
2. Provide an answer to the question that is posed for each.

Example	Equivalent weekly & annual wage // and answer.
<p>1. You have just started working in a retail shop for \$16 per hour.</p> <p>What type of shop might this be, and what are some possible reasons why you are paid \$16 per hour?</p>	
<p>2. You work another job part-time for 12 hours per week earning \$18 an hour.</p> <p>What job might this be and why are you not paid the 'minimum' wage?</p>	
<p>3. A friend works 6 hours/week in this same job as you but is paid \$20 per hour.</p> <p>Why are they paid more, and is it better to work as a part-timer or a casual?</p>	
<p>4. You get offered a contract to do all the work for a short-term project at \$1,600 for the equivalent of 2 full working weeks.</p> <p>What type of project could you do, and how good is this pay?</p>	
<p>5. You get offered \$35/hour as a temp working for a relative's boss. Your relative earns a salary of \$54,000.</p> <p>What type of job might this be, and who earns more on an equivalent basis?</p>	

Preview Sample:
Do not copy

Advanced

Another useful way to calculate the value of your time spent working is to calculate the amount of hours or week's work (in \$), as a percentage of a total you are saving for.

e.g. If saving for a new phone at \$1,500, then 1 hour of work (@\$15) = \$15/ \$1,500; which is 1% of the total amount. You will have to work 100 hours to earn that phone!

1. Choose your own item/product to add to the table.
2. What proportion of each item is earned per hour and for the week?
3. How many hours of work will it take to be able to 'afford' the item?

Example	Holiday to Bali \$ _____	Vehicle \$ _____	\$ _____
a. Brie works 16 hours for the week at \$18/ hour.	- % of item earned per hour?	- % of item earned per hour?	- % of item earned per hour?
	- % of item earned per week?	- % of item earned per week?	- % of item earned per week?
b. Staz works 12 hours per week at \$18.50 per hour.	- % of item earned per hour?	- % of item earned per hour?	- % of item earned per hour?
	- % of item earned per week?	- % of item earned per week?	- % of item earned per week?
c. Tren earns \$400 for his working week of 15 hours.	- % of item earned per hour?	- % of item earned per hour?	- % of item earned per hour?
	- % of item earned per week?	- % of item earned per week?	- % of item earned per week?
d. Yigh earns \$1,330 for a standard full-time working week.	- % of item earned per hour?	- % of item earned per hour?	- % of item earned per hour?
	- % of item earned per week?	- % of item earned per week?	- % of item earned per week?

Preview Sample:
Do not copy

Applied

- a. Assume you get your preferred job next year. How much might you earn?
- b. How much might you have earned by the time you are 25?

21 Managing Money

Skills Development

Consider these common expenditure categories that most people experience as part of day-to-day living.

1. Classify each according to whether they represent a high proportion of your spending (H), a moderate proportion of your spending (M), a low proportion of your spending (L), or not at all (N). Add and classify other categories that might be relevant to you.
2. Estimate amounts for you and set these up as a spreadsheet.
3. Next year will be a new challenge, so how are you doing on the expenditure front?

- | | |
|--|---|
| <input type="checkbox"/> mortgage or rent ____ / ____ | <input type="checkbox"/> lunch and coffees ____ / ____ |
| <input type="checkbox"/> home insurance ____ / ____ | <input type="checkbox"/> take-away food ____ / ____ |
| <input type="checkbox"/> contents insurance ____ / ____ | <input type="checkbox"/> home delivery food ____ / ____ |
| <input type="checkbox"/> rates ____ / ____ | <input type="checkbox"/> meals out ____ / ____ |
| <input type="checkbox"/> electricity/gas ____ / ____ | <input type="checkbox"/> haircuts ____ / ____ |
| <input type="checkbox"/> water ____ / ____ | <input type="checkbox"/> grooming ____ / ____ |
| <input type="checkbox"/> repairs/maintenance ____ / ____ | <input type="checkbox"/> clothing - personal ____ / ____ |
| <input type="checkbox"/> car loan/interest ____ / ____ | <input type="checkbox"/> clothing - work ____ / ____ |
| <input type="checkbox"/> petrol ____ / ____ | <input type="checkbox"/> shoes and footwear ____ / ____ |
| <input type="checkbox"/> insurance ____ / ____ | <input type="checkbox"/> union fees ____ / ____ |
| <input type="checkbox"/> registration ____ / ____ | <input type="checkbox"/> computing ____ / ____ |
| <input type="checkbox"/> service and tuning ____ / ____ | <input type="checkbox"/> services ____ / ____ |
| <input type="checkbox"/> maintenance/repairs ____ / ____ | <input type="checkbox"/> electricals ____ / ____ |
| <input type="checkbox"/> public transport ____ / ____ | <input type="checkbox"/> child-care ____ / ____ |
| <input type="checkbox"/> Uber/taxi etc. ____ / ____ | <input type="checkbox"/> Course fees ____ / ____ |
| <input type="checkbox"/> parking ____ / ____ | <input type="checkbox"/> education fees, books etc. ____ / ____ |
| <input type="checkbox"/> fines and charges ____ / ____ | <input type="checkbox"/> books ____ / ____ |
| <input type="checkbox"/> sporting/club fees ____ / ____ | <input type="checkbox"/> magazines ____ / ____ |
| <input type="checkbox"/> health insurance ____ / ____ | <input type="checkbox"/> holidays ____ / ____ |
| <input type="checkbox"/> gym memberships ____ / ____ | <input type="checkbox"/> gifts and presents ____ / ____ |
| <input type="checkbox"/> medical bills ____ / ____ | <input type="checkbox"/> donations ____ / ____ |
| <input type="checkbox"/> pharmacy ____ / ____ | <input type="checkbox"/> special treats ____ / ____ |
| <input type="checkbox"/> dental ____ / ____ | <input type="checkbox"/> credit card repayments ____ / ____ |
| <input type="checkbox"/> physio & optical ____ / ____ | <input type="checkbox"/> personal loan repayments ____ / ____ |
| <input type="checkbox"/> vet bills and pet care ____ / ____ | <input type="checkbox"/> credit repayments ____ / ____ |
| <input type="checkbox"/> phone & data ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> internet ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> streaming subscriptions ____ | <input type="checkbox"/> |
| <input type="checkbox"/> music purchases ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> entertainment ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> clubs ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> groceries ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> toiletries, beauty & health ____ / ____ | <input type="checkbox"/> |
| <input type="checkbox"/> household products ____ / ____ | <input type="checkbox"/> |

Preview Sample:
Do not copy

Advanced & Applied

Some of you may now be getting very close to buying your first vehicle. As we all know, the costs of running and maintaining a motor vehicle can be very high.

1. Identify your most likely preferred first motor vehicle (and price).
2. Research and list the costs associated with running and maintaining this motor vehicle.
3. Calculate these costs on a weekly, monthly and annual basis.
4. Calculate total weekly, monthly and annual costs.
5. How many hours per week would you need to work just to cover your vehicle costs?

My first motor vehicle:			
Price:	Method to pay for this?		
Expense	Weekly \$	Monthly \$	Annual \$
registration			
compulsory insurance			
optional insurance			
interest on loan			
Totals	/week	/month	/year
Workings:			
So based on an hourly rate of _____ in the occupation of _____			
I would have to work _____ per week just to cover my motor vehicle costs.			

Preview Sample:
Do not copy

22 Have and Have Not

Skills Development

1. List 10 items that you acquired over the past 12 months and the approximate price of each. With a classmate discuss your list, the cost of the items and who paid for them.

1	2	3	4	5
6	7	8	9	10

2. List 10 items that you disposed of over the past 12 months and the approximate price of each. With a classmate discuss your list, their costs and who paid for them.

1	2	3	4	5
6	7	8	9	10

Preview Sample:
Do not copy

3. List 10 things you are going to have to spend money on next year as part of your transition into work and/or study. Discuss these, their costs, and who will pay.

1	2	3	4	5
6	7	8	9	10

Advanced

The value of money changes over time. \$100 ten years ago is not the same as today. You could buy much more with that \$100 than you can now. This means that the relative purchasing power (the value) of money has gone down due to inflation.

You can use a retail price index to calculate the relative prices of items from the past and work out how much they would be in today’s dollars. The ABS has a price index calculator on its website. Find it and use it to complete the following tasks.



1. Calculate the present value of \$1,000 based on each of these time periods.
2. Research the price of common items for each of these time periods (not houses). Calculate the relative value of the dollars used to purchase that item in today’s dollars.

Year	Amount	Value today	Item and price	Value today
1948	\$1,000			
1958	\$1,000			
1968	\$1,000			
1978	\$1,000			
1988	\$1,000			
1998	\$1,000			
2008	\$1,000			
2018	\$1,000			
2016	\$1,000			
2020	\$1,000			
<i>Last year</i>				

Preview Sample:
Do not copy

Applied

So what does this indicate about the prices of goods and services? Do you think it is more expensive to live today or in the past? Answer carefully, as there might be more information you need to consider other than just retail prices.

23 Occupational Wages

Skills Development

It's time to revisit the income amounts of occupations in the world of work.

1. List 5 occupations you are interested in. For each one estimate the average weekly income you would expect an adult to earn in this occupation.

i.	_____
ii.	_____
iii.	_____
iv.	_____
v.	_____

2. Find out the average weekly income for your occupations. Search using:

<https://labourmarketinsights.gov.au> Be sure to note the year of the data you find, as this can vary. Find out 5 other average weekly earnings.

3. Outline why you think this occupation earns that amount. Is this what you expected?



Preview Sample:

Occupation	Average Weekly Income	Explanation
i.		
ii.		
iii.		
iv.		
v.		
vi.		
vii.		
viii.		
ix.		
x.		

Do not copy

Advanced

1. Rank the occupations below in order based on their average weekly income (for a full-time worker). Estimate the average weekly earnings for each.
2. Go online and find out the current average weekly income rates. Make sure you identify when these statistics were from. Re-rank these.
3. How did you go with your rankings? Are there any surprises?

general sales assistant, hairdresser, train and tram driver, retail manager, child-care worker, bar attendant, secondary school teacher, plumber, gardener, police officer

My estimate	
Occupation	AWE
i.	
ii.	
iii.	
iv.	
v.	
vi.	
vii.	
viii.	
ix.	
x.	

Actual	
Occupation	AWE (& for when)
i.	
ii.	
iii.	
iv.	
v.	
vi.	
vii.	
viii.	
ix.	
x.	

Preview Sample:
Do not copy

Applied

How much income do you think you will earn in your lifetime? How will you estimate this? In which decade of your life are you likely to earn the most? Why is that?

24 This and That

Skills Development

As you know, formulae represent quantities and amounts (relationships) associated with particular situations. They involve variables represented in words, or symbols or letters.

1. Develop formulae to represent the following situations in relation to your own financial circumstances. Add 1 more of your own.
2. Use these formulae to make calculations relevant to your own financial circumstances.
3. Comment on what the relationships indicate. Are there things you should be changing so as to improve your life?

Situation	Formula and calculation	Comment
Your income sources.		
Your expenditure patterns. Use 6 major categories plus other.		
Your income to spending ratio.		
Your spending to saving ratio.		
Your debt to income ratio.		
Saving using compound interest		
other		

Preview Sample:
Do not copy

Advanced

Develop 5 algebraic formulae to describe your personal characteristics. This is a bit like a secret numerical code. {e.g. My age is 4 times my youngest son. or $X = 4(Y).$ }

Characteristic	Formula	Description
Your age		
Your height		
Your income		
Your _____		
Your _____		

Applied

- a. We naturally use formulae every day, sometimes without even thinking about them. Reflect on the use of these different types of averages and how they might assist or apply to you in personal and work situations.

Preview Sample:

Question	Personal situation	For work situation
How does mean average apply to me...		
How does median average apply to me...		
How does mode average apply to me...		

Do not copy

All jobs require the development, use and application of formulae to express relationships, ratios and to solve problems. These might be technical, financial or related to varied job tasks such as ratios, and many others.

- b. Identify and describe formulae that apply within an industry. Explain how each is used for work tasks you might have to do.

25 Numerical Problem Solving

Skills Development

Throughout VM Numeracy Senior you have developed many numerical skills that can assist you to solve problems. However, it's up to you to take action to deal with these problems both before they occur and when they arise. You must apply what you have learned.

1. Outline the numerical skills and actions I will use to deal with each problem.
2. How will I assess that I have dealt with the problem effectively?
3. And will I have the discipline to follow through with what I am suggesting?

Problem	Numerical skills/actions	How will I assess?	Will I follow through?
Not enough money!			
Too much spending!			
Too much debt!			
Too often late for work/study			
Can't find where I am going!			
Can't save for the future!			
Need to learn a new skill for work.			
Need to learn a new ICT skill for work.			
Need to estimate amounts and quantities.			
Need to apply formulae.			
your choice			

Preview Sample:
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Advanced & Applied

- a. Numerical skills can help you deal with personal and vocational problems. Consider 4 of these problems (or add your own) and apply numerical skills and tools to help you make personal or vocational improvements.
- ⇒ I spend too much time online.
 - ⇒ I do not get enough physical activity.
 - ⇒ I need to improve my driving skills and/or hours.
 - ⇒ I do not spend enough time out of class doing my assignments.
 - ⇒ I am constantly running out of money or overspending.
 - ⇒ I cannot get enough work hours.
- b. Express these improvements in numerical statements. e.g. I will reduce screen time by 20%. Show before and after numbers as potential outcomes.
- c. What numerical skills, techniques and tools can you apply to help you manage these problems? How so?

Problem 1:**Problem 2:**

Preview Sample:
Do not copy

Problem 3:**Problem 4:**

Reflection and Review

Complete this journal to reflect on your development of Numeracy Skills.

Journal of: _____ Date: _____

⇒ What did I most enjoy during this year as part of my Numeracy studies?

⇒ What major numeracy skills and tools did I develop and apply?

⇒ How did I use and apply what I learned for my personal and social activities?

⇒ How did I use and apply what I learned in my work-related activities?

⇒ What might be the most important things for me to focus on next, and why?

⇒ What other information can I share and/or how would I summarise my experiences?

Preview Sample:
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Vocational and Work Education Resources

	Printed Book	e-version Master license PDFs
Work Experience Journal	___ @ \$22	or ___ @ \$165
Work Placement Journal	___ @ \$33	or ___ @ \$220
PDS Planner: VPC 1&2	___ @ \$33	or ___ @ \$220
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Foundation Numeracy	___ @ \$44	na
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WACE: Career and Enterprise

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CAE: General 11 2ed	___ @ \$60	or ___ @ \$660
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New editions were released in 2022

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