

E-book Code:





Mad Maths for 10 to 12 year olds Book 3

Stimulating problem solving activities for students aged 10 to 12 years.

Written by Greg Mitchell. Illustrated by Terry Allen. © Ready-Ed Publications - 2001

Published by Ready-Ed Publications P.O. Box 276 Greenwood WA 6024 Email: info@readyed.com.au Website: www.readyed.com.au

COPYRIGHT NOTICE

Permission is granted for the purchaser to photocopy sufficient copies for noncommercial educational purposes. However this permission is not transferable and applies only to the purchasing individual or institution.

ISBN 1 87526 887 7

Contents

Worksheet Curriculum Strand: Sub-Strand: Learning Outcome

<u>Page</u>

Tea	chers' Notes	2
Teat 1 2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 8 9 20 21 22 24 25 27 28	 chers' Notes Number: Mental Computation 4.15: Calculates simple addition of whole numbers. Number: Applying Numbers 4.14: Calculates percentages and amounts of profit for involving money. Number: Applying Numbers 4.14: Selects appropriate operations for solving situations involving time. Chance and Data: Interpreting Data 4.27: Reads information provided on axes of bar graphs to compare data. Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentage. Number: Equations 4.13: Solves simple equations expressed as a word problem. Number: Applying Numbers 4.14: Selects appropriate operations to solve word problems. Measurement: Measuring 4.19: Calculates and compares measures of time and distance in word problems. Measurement: Using relationships 4.22: Explores practical situations involving whole nos, percentages and time. Chance and Data: Organising Data 4.25: Classifies and organises data into meaningful categories. Measurement: Time 4.21: Determines duration of time from schedules and timetables. Number: Applying Numbers 4.14: Selects appropriate operations for solving situations involving whole nos. Space: 4.9: Visualises and experiments with diagrams and spatial features to create new 2D shapes. Space: 4.9: Visualises and experiments with diagrams and spatial features to create new 2D shapes. Number: Written Computation 4.16: Divides & multiplies word problems involving whole numbers and money. Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentages. Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentages. Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentages. Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentages. <l< td=""><td>2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</td></l<>	2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
15	Space: 4.9: Visualises and experiments with diagrams and spatial features to create new 2D shapes.	18
14	Number: Applying Numbers 4.14: Selects appropriate operations for solving situations involving whole nos.	17
15	Space: 4.9: Visualises and experiments with diagrams and spatial features to create new 2D shapes.	18
16	Space: 4.7b: Interprets drawings of 3D shapes and investigates surface area.	19
17	Number: Applying Numbers 4.14: Selects appropriate operations to solve word problems.	20
18	Number: Written Computation 4.16: Divides & multiplies whole nos and amounts of money to calculate percentages.	21
19	Number: Mental Computation 4.15: Mentally calculates word problems involving whole numbers and money.	22
20	Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate percentages.	23
21	Number: Applying Numbers 4.14: Explores nos & combinations of sets of objects to solve word problems.	24
22	Measurement: Time 4.21: Investigates concept of times and schedules using number problems.	25
23	Chance and Data: Interpreting Data 4.27: Reads and interprets data from a table; calculates percentages.	26
24	Chance and Data: Displaying Data 4.26: Determines the mean, frequency and range of a set of scores from a table.	27
25	Number: Mental Computation 4.15: Mentally calculates word problems involving whole nos, time and money.	28
26	Number: Mental Computation 4.15: Mentally calculates word problems involving whole nos, time and money.	29
27	Number: Applying Numbers 4.14: Selects appropriate operations to solve word problems.	30
28	Number: Number Patterns 4.12: Explores patterns and combinations of numbers to solve a word problem.	31
29	Space: 4.8: Locates points on a grid by reading coordinates.	32
30	Number: Mental Computation 4.15: Mentally calculates word problems involving whole numbers and money.	33
31	Number: Written Computation 4.16: Divides and multiplies amounts of money to calculate profit.	34
32	Number: Mental Computation 4.15: Mentally solves addition number problems involving two-digit numbers.	35
33	Chance and Data: Organising Data 4.25: Calculates & compares a set of scores to determine range & mean.	36
34	Chance and Data: Displaying & Summarising Data 4.26: Calculates measurements based on a given rate; compares data.	37
35	Chance and Data: Displaying & Summarising Data 4.26: Displays data over a period of time based on a given frequency.	38
36	Chance and Data: Interpreting Data 4.27: Interprets a table and uses information to calculate percentages.	39
37	Number: Equations 4.13: Finds missing numbers to satisfy a numerical constraint.	40
38	Number: Written Computation 4.16: Divides & multiplies whole nos & amounts of money to calculate percentages.	41
39	Number: Written Computation 4.16: Divides & multiplies whole nos & amounts of money to calculate percentages	42
40	Number: Equations: 4.13: Investigates and records different ways of solving a word problem.	43
٨٣٥	wors	11
MIS		44

Answers



Crazy Chris the carpenter made a wooden car with wooden wheels and a wooden engine that wouldn't go!

"Wouldn't you know it!" Chris sighed.

He took it to the local markets where he sold it to a boy called Chip who saw through it right away and paid him a dollar for it in 15 coins.

Des Questions

1. From what was Chris's car made?

2. How much did Chip pay for the car?

- 3. What coins did Chip give Chris?
- 4. If it cost Chris 47 cents to make the car, how much profit did he make?
 - \$_____

What percentage profit did he make? ______%

5. If Chip painted the car and sold it for two dollars to his mate Chop, how much profit would he make? (Amount and percentage.)

\$_____%

Madness

What form of transport do you like the most? Draw you coming to school in it.



Worksheet 8

In television's Mad Championship Wrestling there are sixteen mad wrestlers entered in a 'Knockout' competition. Each wrestler wrestles one other wrestler in the first match and if they win go on to the next match with the loser 'dropping out'. keeps This happening until only one winner is left.

- 1. How many wrestlers are in the championships?
- **2.** How many are in the first round?
- 3. How many are finished after the first round? _____
 What percentage is this?
- 4. How many rounds does it take to find a winner? _____
- 5. If Strangle McGurk lost in the third round what place would he have come? (1st, 2nd ...?)
- **b.** If each wrestler is paid \$100 for a first round win, \$200 for a second round win and so on, how much would the winner win?
- 7. Draw up a list of sixteen good names for the wrestlers. (Don't be sexist!)

Then on the back of this sheet draw up a match ... losers and all!

Madness

Draw yourself as a wrestler. Give yourself a killer of a name!

		Channel 8-7	
	8:00 9:00 9:30 10:30	Stragglers Street Grubby School Yucky Smells Cooking Show Cricket: <i>Bashers vs Smashers. One day match. Morning session.</i>	
	12:30 12:45 2:00	News & Weather Afternoon Movie: 'How Itchy My Armpits'. Cricket: Bashers vs Smashers. Afternoon session.	
	4:00 5:00 5:30	Stragglers Street Grubby School The Amazing Adventures of an Absolute Ant	
	5:58 6:00 6:15 6:45	News Headlines Yucky Smells Cooking Show Dr What Video ideo Music Show	
	7:00 7:30 7:43	News The Baddies The 7:43 and 30 Seconds Report	
	8:00 9:10 10:00 10:05	The Six Freds. Comedy. The Monkeys from Banana State Late News and Weather Sports Night: Reviews of the weekend in sport	
	10:45 11:25 6:20	Big City for Little People Mad Mad Music until dawn. Close	2
I S 1.	Questic What i	s on Channel 8-7 at 10.30am?	
2.	Which	show takes up the most time?	
3.	How la What i	s the afternoon movie?	
-	For ho	w long does it go?	
4.	Which	shows are repeated?	
5.	How lo	ong is the '7.43 and 30 Seconds Report' on for?	
6.	How Ic	ong in hours and minutes does Channel 8-7 broadcast for?	
7 .	Which	show goes for only 15 minutes?	
8.	Which	shows go longer than an hour?	

Madness

Invent your own TV show. Describe it like they do in the TV guides.

K I				
N	\mathbf{n}	n	າດ	٠
1 1	u		1C	٠



Cewbs are cute little cube shaped aliens who love to be stacked together.

One sunny day at the beach 27 little cewbs stacked themselves into a cute cube. Then along came the Cewb beach patrol and sprayed the outside of the Cewbs with sunblock cream.

"Gee," said the sunblock sprayer, "I bet I have missed a few sides in this operation. I hope no cute Cewbs in the cube get cooked!"

Nations

- 1. How many Cewbs are in the cube shape?_____
- **2.** How many Cewbs are in each layer?
- 3. How many Cewbs have every side sprayed? _____
- 4. How many Cewbs have two sides sprayed? _____
- 5. How many Cewbs have three sides sprayed? _____
- **b.** How many possible sides are there between all the cubes?
- 7. How many sides were sprayed? _____
- **8.** Which shape (rectangular prism) of 27 Cewbs would get the most sides sprayed by the beach patrol?

Madness

Design your own cute little 3 dimensional alien like a Cewb.

Worksheet 21

Ms Heavy's maths class have made rings to be sold at the school bazaar. Each ring has two different colours stitched around it. Ms Heavy has six different colours she can use - red, yellow, blue, green, pink and orange, which means she can make lots of different combinations of colours.

Pete Punk found out lots of different combinations of places he can wear the rings.



Madness

What would you look like with multi-coloured hair. Draw yourself.