Victor Chu 20/11/03

YEAR 8 MATHEMATICS
Specimen Test

47/55

1. Good effort!

COURSE/LEVEL

NSW Secondary High School Year 8 Mathematics.

TOPICS

- Decimals
- Percentages
- Pythagoras Theorem

TOTAL TIME: 60 MINUTES

INSTRUCTIONS   Calculators may NOT be used in Part A.
All answers to be written in the spaces indicated.
The test consists of four parts:

Part A	10 marks	(no calculator)
Part B	15 marks	
Part C1	15 marks	
Part C2	15 marks	
Total	55 marks	

(Note: Advanced students could leave out Part C1 and other students could leave out Part C2. The total time allowed would then reduce to 45 minutes.)

Part A

- You are given exactly 10 minutes to answer Part A.
- Attempt **ALL** questions.   Write your answers in the spaces provided.

A1 $0.32 + 100 =$ `1 0 0 . 3 2 ✓`

A2 $0.2 \div 2 =$ `0 . 1 ✓`

A3   Find the difference between 50% of $50 and 100% of $100.

- ○ $25
- ✓ ● $75
- ○ $50
- ○ $100

A4   In 142.67, the digit 7 stands for

- ○ 7 ones
- ✓ ● 7 hundredths
- ○ 7 tenths
- ○ 7 tens

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A5 Steven earnt $40 working after school for a week. He spent $5 on the first day. What fraction of his money had he left ?

- ○ $\frac{1}{8}$
- ✓ $\frac{7}{8}$
- ○ $\frac{4}{5}$
- ○ $\frac{1}{5}$

A6 How many times bigger is $2\frac{3}{4}$ compared to $\frac{1}{8}$?

- ○ 11
- ○ 33
- ✓ 22
- ○ none of these

A7 $\frac{0.3 \times 0.02}{0.3} =$

- ○ 0.2
- ○ 2
- ✓ 0.02
- ○ 0.002

A8 Josette has twelve 5c coins, eight 10c coins, seven 20c coins, five 50c coins and four $2 coins. Josette's coins add up to

- ○ $10.80
- ○ $12.40
- ○ $12.50
- ✓ $13.30

A9 An athlete leaves the stadium. He runs 4 km due North, then East for 8 km, then South for 4 km. How far is the athlete from the stadium?

- ○ 4 km
- ✓ 8 km
- ○ 12 km
- ○ 6 km

A10 Two glasses together contain 300 mL of water. The first glass contains 50 mL more than the second glass. How much water does the first glass contain?
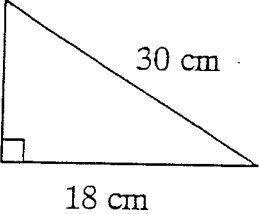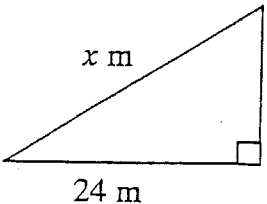
- ○ 200 mL
- ✓ 175 mL
- ○ 250 mL
- ○ 150 mL

PART B:

Write your answers in the space provided. Show your working where necessary.

(15 marks)

	QUESTION
1	Write $\dfrac{3}{16}$ as a decimal. 0.1875 ✓
2	$\sqrt{289} =$ 17 ✓
3	In a bouquet, 10% of the flowers are red, 55% are blue and the remainder are yellow. What percentage are yellow? 35% ✓
4	How long is the hypotenuse in this triangle? 30 cm 24 cm 18 cm $30\,cm$ ✓
5	Write 72% as a fraction in simplest form.　$\dfrac{18}{25}$ ✓
6	What percentage is shaded? 50% ✓
7	Find the value of x.　　　　(2 marks) x m 10 m 24 m $x = 26m$ ✓
8	Express 208% as a decimal.　2.08 ✓

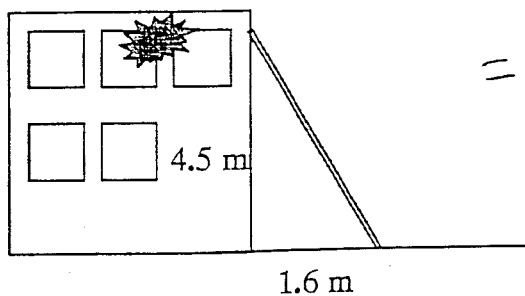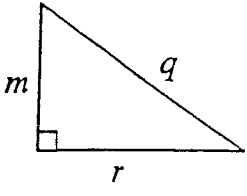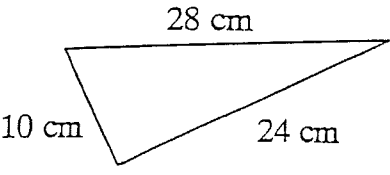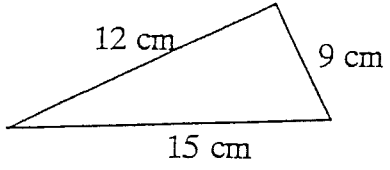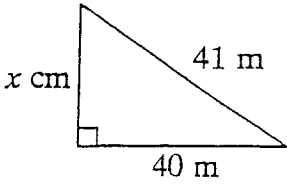|	QUESTION
9	Mary received a mark of 32 out of a possible 40 marks. Express Mary's mark as a percentage. 80% ✓
10	Helen has a sales job where she is paid 12% commission on her sales. Calculate Helen's commission if her sales for the week totalled $3029. (Answer correct to the nearest cent.) ($363.48) $363.50 ✓
12	A fire fighter places a ladder on a window sill 4.5 m above the ground. If the foot of the ladder is 1.6 m from the wall calculate the length of the ladder correct to 1 decimal place. (2 marks) 4.5 m = 4.8m ✓ 1.6 m
13	Target advertised a 15% discount on the marked price of all swimwear. (2 marks) (a) Calculate the discount of a bikini with a marked price of $26. $3.90 ✓ (b) How much does the bikini cost? $22.10 ✓

Name:_____ Teacher:_____

PART C1:
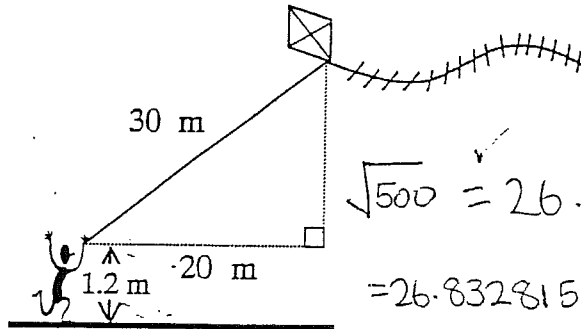Write your answers in the space provided. Show your working where necessary. **(15 marks)**

	QUESTION
1	Circle the correct statement.
	A $\quad q^2 = r^2 - m^2$ $\qquad$ B $\quad m^2 = r^2 - q^2$
	✓ Ⓒ $\quad q^2 = r^2 + m^2$ $\qquad$ D $\quad m^2 = r^2 + q^2$
2	Express 0.682 as a percentage. $\qquad = 68.2\% \ ✓$
3	Express $16\frac{1}{2}\%$ as a decimal. $\qquad = 0.165 \ ✓$
4	Triangle 1 $\qquad\qquad$ Triangle 2
	28 cm $\qquad$ 12 cm $\quad$ 9 cm
	10 cm $\quad$ 24 cm $\qquad$ 15 cm
	$\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ **(2 marks)**
	Which of these triangles are right angled? Triangle 2 ✓
	Give a clear reason for your answer.
	Using $9^2 + 12^2 = 15^2$, the answer is clearly correct. ✓
5	Find the value of x. $\qquad$ **(2 marks)**
	x cm $\quad$ 41 m
	$\qquad\qquad x = 9 \text{cm} \ ✓$
	40 m

	QUESTION
6	Decrease $610 by 5%. $$=\$579.50 \checkmark$$
7	Jeffrey is holding a kite string 1.2 metres above the ground. How high is the kite above the ground? (3 marks) 30 m 1.2 m ·20 m $\sqrt{500} = 26.8\,m + 1.2 = 28\,m.$ (to 1 decimal place) $= 26.83281573$ (actual answer)
8	A chocolate company packs bags of assorted chocolates for the Easter Show. The Sample Bag consists of (2 marks) 2 Mars bars 3 Flake bars 4 Picnic bars 3 Crunchy bars What percentage of the show bag is: (i) Crunchy bars $25\% \checkmark$ (ii) Flake and Picnic bars $58.3\% \checkmark$

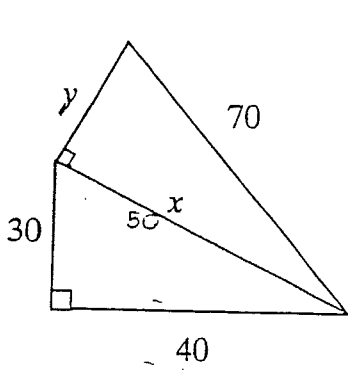|	QUESTION	
9	Find the (simple) interest earned on $1785 at 7% per annum for:	(2 marks)
	(i) 1 year $124.95 ✓	
	(ii) 18 years $2249.10 ✓	

PART C2:

Write your answers in the space provided. Show your working where necessary.

(15 marks)

	QUESTION
1	Find the values of x and y (correct to one decimal place). **(3 marks)**

$x = 50$ ✓

$y = 4750M$ 49.0

| 2 | Write 50% of 50% as a decimal. **(1 mark)** |

0.25 ✓

| 3 | **(3 marks)** |

14.6
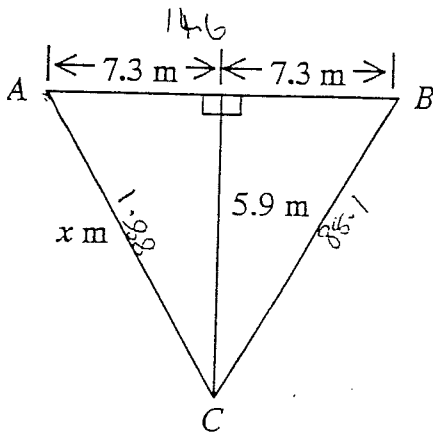
(a) Find the value of x correct to 1 decimal place. $88.1 m$

$= 94$ (to 1 d.p.)

(b) Find the perimeter of $\triangle ABC$

$= 190.8 m$

$33.4 cm$

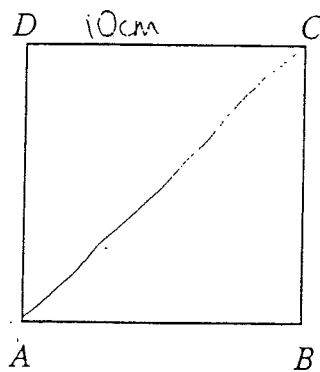|	QUESTION
4	James spent 40% of his money and then found that 50% of the remainder was 60 cents. (i) How much was the remainder?　　　　　　　　　　　(3 marks) 　　　$1·20 (ii) How much did he have at first? $2·00 　　　　　　　　　　　$3·00
5	Increase $100 by 10% and decrease the result by 10%. What is the final result? 　　　　　　　　　　　(2 marks) 　　$99 ✓
6	A, B, C and D are the four corners of a square as shown. The side length of the square is 10 cm. An ant took 2 minutes to walk along the perimeter of the square from A to B and then to C. A fellow ant walked directly from A to C at the same speed as the first ant. How long did its journey take? (Answer to the nearest second). 　= 85secs ✗　　42sec　try again D　10cm　　C　(3 marks) A　　　　B $S = \dfrac{D}{T}$