MARCELLIN COLLEGE RANDWICK

YEAR 8.3

MATHEMATICS

ASSESSMENT TASK # 2

2007

NAME: _____

TEACHER: _____

MARK: _____ / 60

Time Allowed: **60 minutes**

Directions:

Answer all questions in the spaces provided.
Answer Multiple Choice Questions on Separate Answer Sheet.
Show all necessary working.
Where more than one mark is allocated to a question, full marks will not be awarded for answers only.
Marks may not be awarded for careless or badly arranged work.

Section 1

Question 1

Fill in the table below:

(1 mark each)

Decimal	Percentage	Fraction
.30		
	35%	
		$\frac{17}{20}$

Question 2

Answer the following:

(1 mark each)

Question	Answer
a) $0.31+6.92-\frac{1}{2}$	
b) $17.49-13.3+6$	
c) $\sqrt{25}+12.4$	

d) $5^2 + 12^3 - 4$	

Question 3

(1 mark each)

a) Find 15% of $123

b) Find 18.5% of 1200kg

c) Increase $1450 by 17%

d) Decrease 990m by 20%

Question 4

(2 marks each)

The original price of an MP3 player is $217 if there is a sale of 15% off the original price, find:

a) The amount of money saved

b) The sale price of the MP3 player

Section 2

Question 1

Simplify the following:

(1 mark each)

a) $5m + 6m - m$	
b) $7y + 3r - 2y + r$	
c) $4m \times 3$	
d) $4a \times 8b$	
e) $r + r + r + r$	
f) $m \times m \times m \times m$	
g) $7f + 4f - 3m$	
h) $2a \times 4a^3$	
i) $6m + 4t + 3m$	

j) $9p+3p-2p$	

Question 2

Solve the following equations:

	Marks
a) $4x+1=33$	2
b) $p-4=17$	1
c) $\frac{y}{3}=20$	1
d) $5m=-125$	1
e) $2x+1=-9$	2

f) $\frac{w+1}{3}=4$	2
g) $8m-1=-8$	2
h) $9=-3m$	1

Question 3

Expand and simplify:

	Marks
a) $6(m+1)$	1
b) $4(m-8)$	1
c) $5(y-1)+6(y+2)$	2
d) $3(n+5)+2n$	2

Question 4

Simplify:

	Marks
a) $\frac{4m}{3}+\frac{5m}{3}$	1
b) $\frac{6y}{7}-\frac{y}{7}$	1
c) $\frac{5x}{3}+\frac{7x^3}{2x^3}$	2
d) $\frac{3}{y}\times\frac{4}{x}$	1
e) $\frac{4}{g}\div\frac{3}{s}$	1

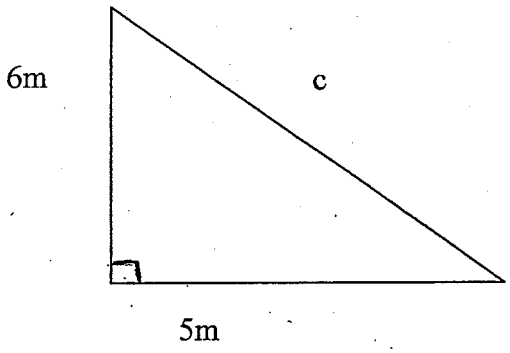
Section 3

Question 1

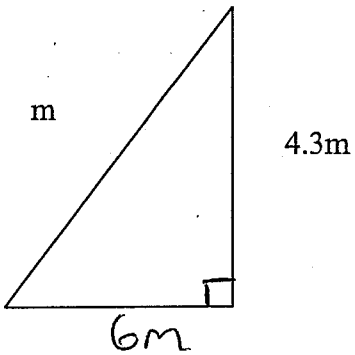
Use Pythagoras' Theorem to find the value of the pronumeral:
(2 marks each)

$c^2 = a^2 + b^2$

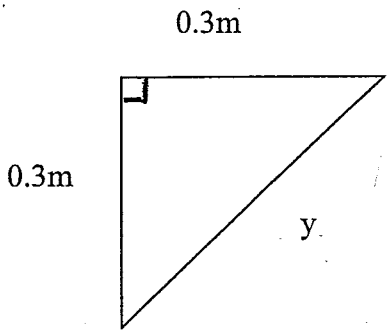
a)



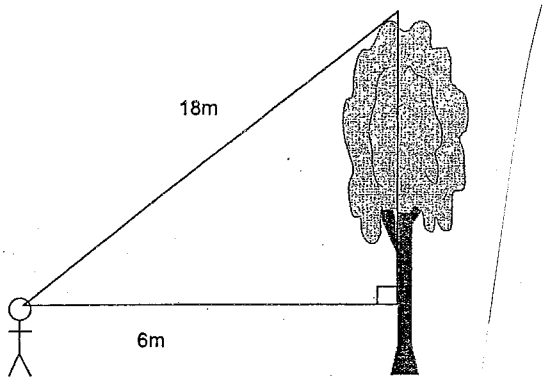
b)



c)



c) If I am standing 6m away from a tree and my line of sight reaches 18m to the top of the tree. If I am 1.2m, find the height of the tree.



MARCELLIN COLLEGE RANDWICK

YEAR 8.3

MATHEMATICS

ASSESSMENT TASK # 2

2007

NAME: _____

TEACHER: _____

MARK: 59/60 Excellent!

Time Allowed: **60 minutes**

Directions: Answer all questions in the spaces provided.
Answer Multiple Choice Questions on Separate Answer Sheet.
Show all necessary working.
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Marks may not be awarded for careless or badly arranged work.

Section 1

Question 1

Fill in the table below:

(1 mark each)

Decimal	Percentage	Fraction
.30	30% ✓	$\frac{3}{10}$ ✓
.35 ✓	35%	$\frac{7}{20}$ ✓
.85 ✓	85% ✓	$\frac{17}{20}$

Question 2

Answer the following:

(1 mark each)

Question	Answer
a) $0.31+6.92-\frac{1}{2}$	0.31+6.92 = 7.23 7.23−½ ✓ = 6.73
b) $17.49-13.3+6$	17.49−7.3 = 10.19 ✓
c) $\sqrt{25}+12.4$	5+12.4 =17.4 ✓

d) 5^2+12^3-4	$25+1728-4$ $=1749$ ✓

Question 3

(1 mark each)

a) Find 15% of $123

$.15 \times \$123$
$= \$18.45$ ✓

b) Find 18.5% of 1200kg

$.185 \times 1200$
$= 222kg$ ✓

c) Increase $1450 by 17%

$1.17 \times \$1450$
$= \$1696.50$ ✓

d) Decrease 990m by 20%

$.8 \times 990$
$= 792m$ ✓

Question 4

(2 marks each)

The original price of an MP3 player is $217 if there is a sale of 15% off the original price, find:

a) The amount of money saved

$.85 \times 217$
$= \$184.45$ ✓

Money saved $= \$217 - \$184.75$
$= \$32.25$ ✓

b) The sale price of the MP3 player

$.85 \times \$217$
$= \$184.45$ ✓

Section 2

Question 1

Simplify the following:

(1 mark each)

a) $5m+6m-m$	$11m-m$ $=10m$ ✓
b) $7y+3r-2y+r$	$7y-2y+3r+r$ $=5y+4r$ ✓
c) $4m\times3$	$12m$ ✓
d) $4a\times8b$	$32ab$ ✓
e) $r+r+r+r$	$4r$ ✓
f) $m\times m\times m\times m$	$4m\times$ m^4
g) $7f+4f-3m$	$11f-3m$ ✓
h) $2a\times4a^3$	$8a^4$ ✓
i) $6m+4t+3m$	$9m+4t$ ✓
j) $9p+3p-2p$	$12p-2p$ $=10p$ ✓

Question 2

Solve the following equations:

Marks

a) $4x+1=33$ $-1\ \ -1$ $4x=32$ $x=8$ ✓	2
b) $p-4=17$ $+4\ \ +4$ $p=21$ ✓	1
c) $\frac{y}{3}=20$ $\times3$ $y=60$ ✓	1
d) $5m=-125$ $\div5\ \ \div5$ $m=-25$ ✓	1
e) $2x+1=-9-1$ -1 $2x=-10$ $x=-5$ ✓	2

f) $\frac{w+1}{3}=4$	$w+1=12$ $-1 \quad -1$ $w=11$ ✓	2
g) $8m-1=-8$	$+1 \quad +1$ $8m=-7$ $m=-\frac{7}{8}$ ✓	2
h) $9=-3m$	$m=\frac{9}{-3}$ $=-3$ ✓	1

Question 3

Expand and simplify:

		Marks
a) $6(m+1)$	$6m+6$ ✓	1
b) $4(m-8)$	$4m-32$ ✓	1
c) $5(y-1)+6(y+2)$	$5y-5+6y+12$ $=5y+6y-5+12$ $=11y+7$ ✓	2
d) $3(n+5)+2n$	$3n+15+2n$ $=5n+15$ ✓	2

Question 4

Simplify:

		Marks
a) $\frac{4m}{3}+\frac{5m}{3}$	$\frac{9m}{3}=3m$ ✓	1
b) $\frac{6y}{7}-\frac{y}{7}$	$\frac{5y}{7}$ ✓	1
c) $\frac{5x}{3}+\frac{7x}{2}$	$\frac{10x+21x}{6}=\frac{31x}{6}$ ✓	2
d) $\frac{3}{1xy}\times\frac{4x}{x}$	$\frac{12}{yx}$ ✓	1
e) $\frac{4}{g}\div\frac{3}{s}$	$\frac{4}{g}\times\frac{s}{3}=\frac{4s}{3g}$ ✓	1

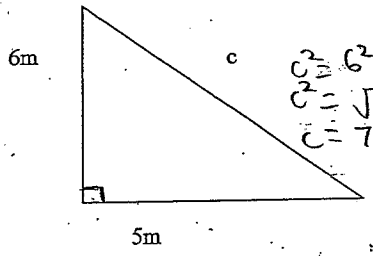
Section 3

Question 1

Use Pythagoras' Theorem to find the value of the pronumeral:
(2 marks each)

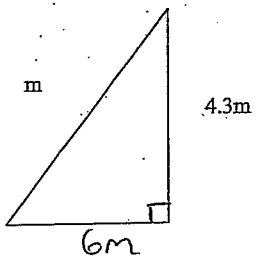
$c^2 = a^2 + b^2$

a)



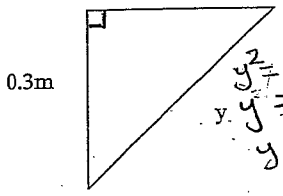
$c^2 = 6^2 + 5^2$
$c^2 = \sqrt{61}$
$c = 7.8m$

b)



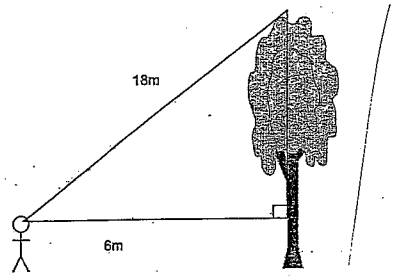
$m^2 = 6^2 + 4.3^2$
$m^2 = \sqrt{54.49}$
$m = 7.4m$

c)



$y^2 = 0.3^2 + 0.3^2$
$y = \sqrt{0.18}$
$y = 0.42m$

c) If I am standing 6m away from a tree and my line of sight reaches 18m to the top of the tree. If I am 1.2m, find the height of the tree.



$x^2 = 18^2 - 6^2$
$x = \sqrt{288}$
$= 16.97m$

Total height $= 16.97m + 1.2m$
$= 18.17m$