Carlingford High School

Mathematics

Year 10 (5.1)

Yearly Exam

2018

Student Number: _____

Time allowed: 90 minutes

- Approved calculators allowed
- Answer all questions in the spaces provided
- All questions are worth 1 mark unless otherwise stated
- Complete the examination in blue or black pen
- Draw diagrams using pencil and a ruler

Marking Record

Strand	Question	Topic	Mark	
Number and Algebra	1	Linear Relationships	/9	
	2	Simple and Compound Interest	/5	
	3	Algebraic Expressions	/25	
	4	Equations and Inequations	/6	
	5	Number Plane Graphs	/3	
	6	Rates and Ratios	/11	
Measurement and Geometry	7	Area and Surface Area	/13	
	8	Trigonometry	/9	
	9	Congruent and Similar Figures	/14	
Statistics and Probability	10	Data Analysis	/7	
	11	Probability	/10	
		Total Mark	**/112**	**%**

Question 1

(a) Complete each table for the given equation.

(i) $y = x - 3$

x	0	1	2
y			

(ii) $y = 7x + 1$

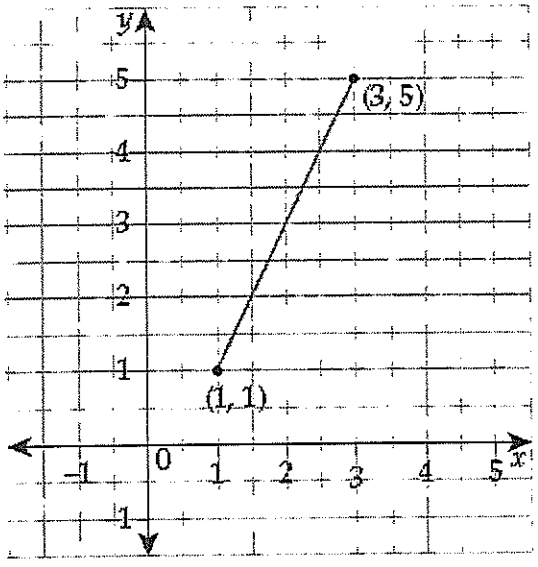
x	-1	0	1
y			

(b) Which equation matches this table of values?

x	-1	0	1	2
y	2	0	-2	-4

A. $y = 2x$ B. $y = -2x$
C. $y = x + 3$ D. $y = 2x + 3$

(c)



(i) Use Pythagoras' Theorem to find the length of this line.

$c^2 = 2^2 +$ _____ ^{2}

$c =$ _____ (correct to 1 decimal place)

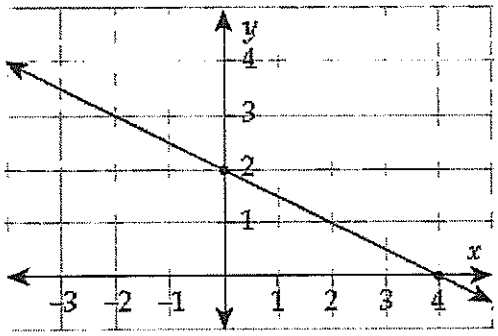
(ii) Complete the working to find the gradient of the line in (i).

$y = \frac{Rise}{Run}$

$y =$ _____

[3 marks]

(d)



For the above line, find the x-intercept.

_____

(e) $x = 5$ is a horizontal line. True or False?

_____

(f) Which equation represents a line with gradient -3 and y-intercept 1.

A. $y = x - 3$ B. $y = -3 + x$
C. $y = 3x - 1$ D. $y = -3x + 1$

Question 2

(a) Use $I = PRN$ to calculate the simple interest on \$800 at 2.5% for 3 years.

Interest = _____

_____

(b) A new car cost \$38 000. Herbie buys the car on the following terms:

5% deposit plus repayments of \$740 each month for 5 years.

(i) Deposit = _____

_____

(ii) Repayments = _____

_____

(iii) How much interest did Herbie pay?

Interest = _____

_____

[3marks]

(c) Use the formula $A = P(1 + r)^n$ to find the value of *A*, if \$5000 is invested at 5%*p.a.* for 5 years.
(Write your answer correct to the nearest cent)

A = _____

_____

Question 3

(a) Is each statement **true** or **false**?

(i) The difference between $3x$ and 4 is $3x - 4$.

_____

(ii) Twice k plus 1 is $k^2 + 1$.

_____

(iii) The product of $2y$ and $3y$ is $5y^2$.

_____

[3 marks]

(b) Given that $g = -2$ and $h = 5$, find the value of:

(i) $g + h$ _____

(ii) $3h - g$ _____

(iii) $3g^2$ _____

[3 marks]

(c) Simplify each expression.

(i) $2m + m - 1 =$ _____

(ii) $6gh - 4hg =$ _____

(iii) $6c \times (-3c) =$ _____

(iv) $24x \div 6x =$ _____

[4 marks]

(d) Expand each expression.

(i) $4(x - 2) =$ _____

(ii) $-3(4 + y) =$ _____

[2 marks]

(e) Expand and simplify

$10(a + 9) - 5a =$ _____

_____

[2 marks]

(f) Factorise

(i) $6mn + 4m = 2m($_____ $+$ _____$)$

(ii) $-k^2 - k =$ _____ $(k +$ _____$)$

[2 marks]

(g) Simplify

(i) $e^{12} \div e^3 =$ _____

(ii) $3f^2 \times 2f^3 =$ _____

(iii) $(4g^5)^2 =$ _____

(iv) $4h^0 =$ _____

[4 marks]

(h) Write 3^{-2} as a fraction. _____

(i) Round 31 415 to 2 significant figures.

_____

(j) Write each number in scientific notation.

(i) $16\,000\,000 = 1.6 \times 10$——

(ii) $0.000\,789 =$ _____ $\times 10^{-4}$

[2 marks]

(k) Calculate $(1.2 \times 10^3) \times (4.5 \times 10^{-6})$

_____

Question 4

Complete each of the following equation steps.

(a) $a + 9 = 15$

$a =$ _____

(b) $2c - 5 = 21$

$2c =$ _____

$c =$ _____

(c) $5e - 6 = 3e$

_____ $= 6$

$e = 3$

(d) $4(g + 3) = 20$

$g + 3 =$ _____

(e) $2k^2 = 32$

$k^2 =$ _____

$k =$ _____

[2 marks]

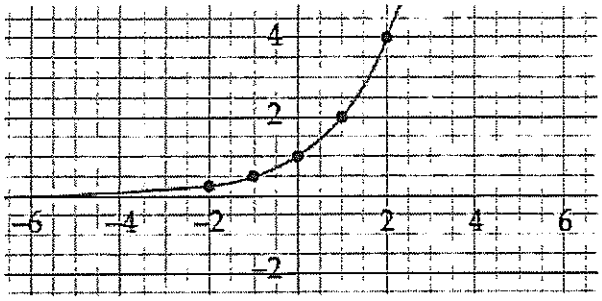
Question 5

(a) The graph of which of these equations is a **parabola**?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 1$

(b)

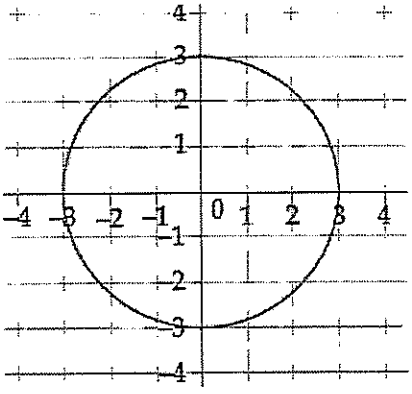


This is the graph of which of the following equations?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 1$

(c)



This is the graph of which of the following equations?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 9$

Question 6

(a) Complete each equivalent ratio.

(i) $4:3 =$ _____$:12$

(ii) $\frac{9}{2}:$_____ $= 18:4$

[2 marks]

(b) Simplify each ratio.

(i) $60:200 =$ _____:_____

(ii) $0.5:4.5 =$ _____:_____

(iii) $12cm:90mm =$ _____:_____

$=$ _____:_____

[3 marks]

(c) The ratio of boys to girls in a class is 5: 3. If there are 15 boys in the class

(i) How many girls are there?

_____

(ii) How many students are there in the class?

_____

[2 marks]

(d) Benji is paid $539 for working 35 hours most weeks.

(i) What is his hourly rate of pay?

Rate of pay = _____/hour

(ii) How much would he earn if he works a 40 hour week?

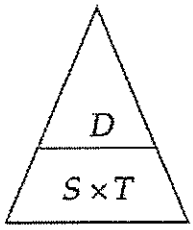
_____

(iii) How many hours will he need to work to earn $354.20?

_____

[3 marks]

(e) In a school zone, cars can travel a maximum of 40*km/h*.



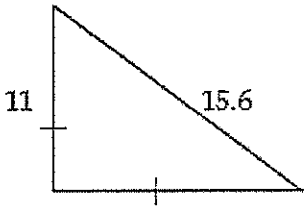
How many metres would a car travel in 3 seconds?

_____

_____ *m*

Question 7

(a) Find the perimeter of this shape.



Perimeter = _____

= _____

(b) Write the circle part that matches the sentence. (You do not need to use all the words, but you do need to **spell them correctly**)

Radius	Diameter	Circumference
Arc	Sector	Quadrant
Semicircle	Chord	Segment
Tangent		

(i) A line that touches the outside of the circle once.

_____

(ii) A fraction of the circle's circumference.

_____

(iii) An interval from one edge of a circle to another edge, not through the centre.

_____

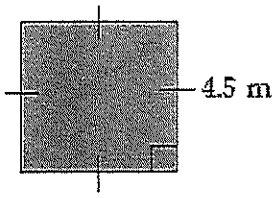
[3 marks]

(c) Use $C = \pi d$ to find the circumference of a circle with diameter 8*cm*. Write your answer correct to 1 decimal place.

Circumference = _____ *cm*

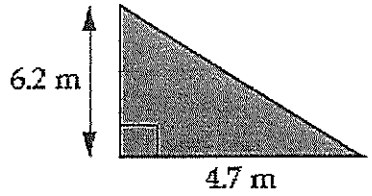
(d) Find the area of each shape.

(i)



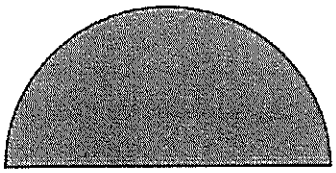
Area = _____ m^2

(ii)



Area = _____ m^2

(iii)



Area = $\frac{1}{2} \times \pi \times r^2$

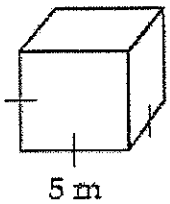
$= \frac{1}{2} \times \pi \times$ _____^{2}

= _____ m^2

[4 marks]

(e) Use the given formula to find the surface area of each prism.

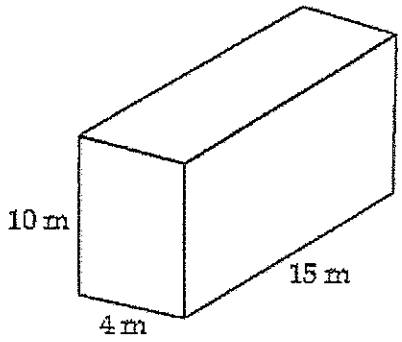
(i)



Surface area = $6 \times s^2$

= _____ m^2

(ii)



Surface area = $2 \times (l + b + h)$

$(l = length, b = breadth, h = height)$

Surface area = _____

_____ m^2

[2 marks]

(f) A triangular prism is made up of 5 shapes.

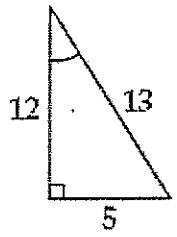
Two _____s and

three _____s.

[2 marks]

Question 8

(a)

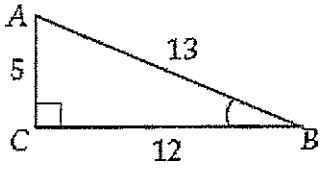


Hypotenuse = _____

Opposite side = _____

[2 marks]

(b)



Use ***SohCahToa*** to find each of the following fractions.

(i) $sinB =$ _____

(ii) $tanA =$ _____

[2 marks]

(c) Solve the following equations to find missing sides, correct to 1 decimal place.

(i) $cos40^{\circ} = \frac{x}{20}$

$x =$ _____

_____

(ii) $sin19.5^{\circ} = \frac{8.2}{y}$

$y =$ _____

_____

[2 marks]

(d) Solve the following equations to find the missing angles.

(i) $tanA = 3.5$ (correct to the nearest degree)

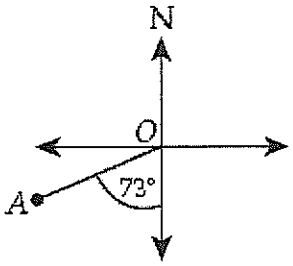
$A =$ _____

(ii) $sinB = \frac{45}{80}$ (correct to the nearest minute)

$B =$ _____ ° _____ ′

[2 marks]

(e)



The bearing from *O* to *A* can be written as $S73^{\circ}W$, or as a three-figure bearing.

The three-figure bearing is _____ _____ _____ °

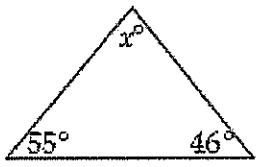
Question 9

(a) How many degrees do the angles of a triangle add up to?

A. 90° B. 180°
C. 270° D. 360°

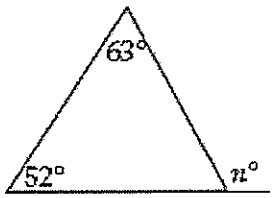
(b) Find the value of the pronumeral for each of these triangles.

(i)



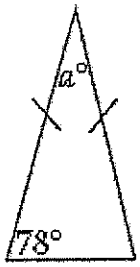
$x =$ _____

(ii)



$n =$ _____

(c) (i)



Find the value of the pronumeral.

$a =$ _____

(ii) Complete the reason.

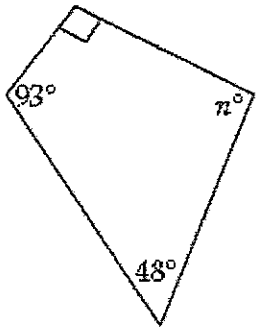
(Angles in an _____

_____)

[2 marks]

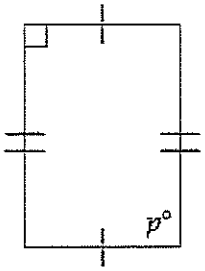
(b) Find the value of the pronumeral for each of these quadrilaterals.

(i)



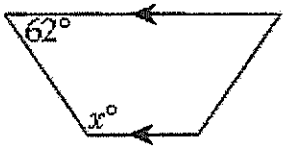
$n =$ _____

(ii)



$p =$ _____

(iii)

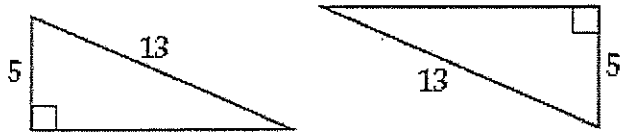


$x =$ _____

[3 marks]

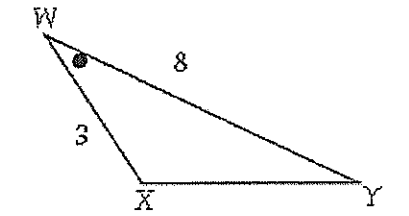
(c) Which test proves that these pairs of triangles are congruent? (Circle the correct answer)

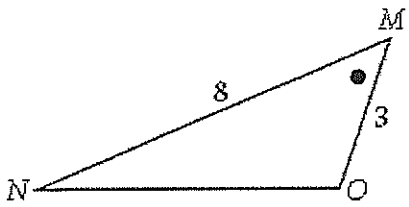
(i)



SSS **SAS** **AAS** **RHS**

(ii)





SSS **SAS** **AAS** **RHS**

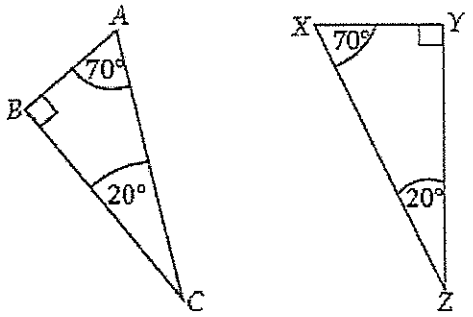
[2 marks]

(d) Which pair of shapes are always similar?

A. Two triangles B. Two rectangles

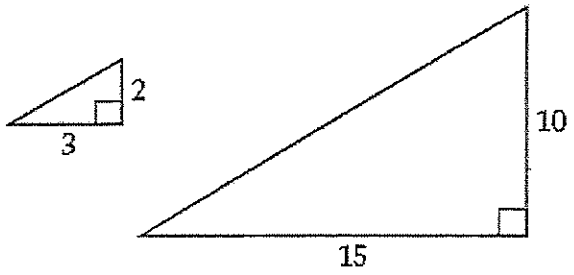
C. Two parallelograms D. Two squares

(e) This pair of triangles are similar.



Which side matches BC in ΔXYZ? _____

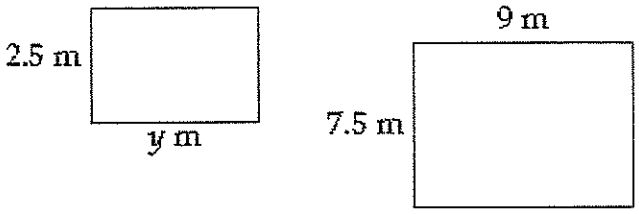
(f)



Find the scale factor for this enlargement.

Scale factor = _____

(g) Find the value of the pronumeral for this pair of similar figures.



$y =$ _____

Question 10

(a) For the data 3, 4, 4, 7, 9, 12, 12, 12 and 30, find the

(i) Mode = _____

(ii) Median = _____

(iii) Mean = _____ ÷ 9

= 10.3 (correct to 1 decimal place)

[3 marks]

(b)

Score	Frequency
3	4
4	12
5	8
6	8

For the scores in this frequency table, find the

Mode = _____

Median = _____

Relative frequency of 4.
(Write your answer as a decimal)

_____

[3 marks]

(c) Find the range for the scores in this stem-and-leaf plot.

Stem	Leaf
4	3
5	2 6
6	4 5
7	3 4 7
8	1 6 8 9

Range = _____

Question 11

(a) When rolling a standard six-sided die, find the probability that the number that comes up is:

(i) 1. _____

(ii) Greater than 4. _____

(iii) A factor of 6. _____

[3 marks]

(b) A packet contains a number of different coloured lollies:

52 red 36 green 12 yellow

One lolly is chosen at random. Calculate the following probabilities.

(i) $P(Red) =$ _____

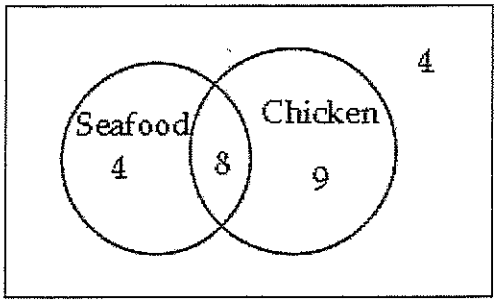
(ii) $P(Not\ Red) =$ _____

(iii) $P(Red\ or\ Green) =$ _____

(iv) $P(Blue) =$ _____

[4 marks]

(c) A number of students were surveyed to find out whether they liked chicken or seafood. The results are given in the Venn diagram.



(i) How many students were surveyed?

_____

(ii) How many students liked seafood and chicken?

_____

(iii) A student is chosen at random. What is the probability that they don't like chicken or seafood?

_____

[3 marks]

END OF TEST

(Now, go back and check your answers!)

Carlingford High School

Mathematics

Year 10 (5.1)

Yearly Exam

2018

Name: ANSWERS.

Time allowed: 90 minutes

- Approved calculators allowed
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Statistics and Probability	10	Data Analysis	/7	
	11	Probability	/10	
		Total Mark	**/112**	**%**

Question 1

(a) Complete each table for the given equation.

(i) $y = x - 3$

x	0	1	2
y	-3	-2	-1

(ii) $y = 7x + 1$

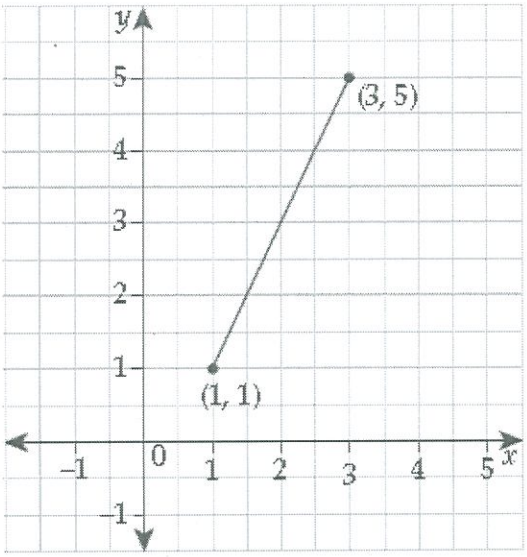
x	-1	0	1
y	-6	1	8

(b) Which equation matches this table of values?

x	-1	0	1	2
y	2	0	-2	-4

A. $y = 2x$ B. $y = -2x$
C. $y = x + 3$ D. $y = 2x + 3$

(c)



(i) Use Pythagoras' Theorem to find the length of this line.

$c^2 = 2^2 +$ 4 ^{2}

$c =$ 4.5 (correct to 1 decimal place)

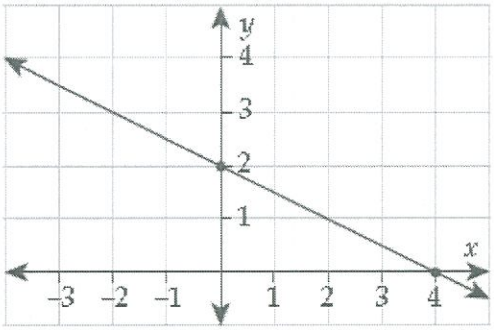
(ii) Complete the working to find the gradient of the line in (i).

$y = \frac{Rise}{Run}$

$y =$ 4/2 or 2

[3 marks]

(d)



For the above line, find the x-intercept.

4

(e) $x = 5$ is a horizontal line. True or False?

False

(f) Which equation represents a line with gradient -3 and y-intercept 1.

A. $y = x - 3$ B. $y = -3 + x$
C. $y = 3x - 1$ D. $y = -3x + 1$

Question 2

(a) Use $I = PRN$ to calculate the simple interest on \$800 at 2.5% for 3 years.

Interest = $800 \times 2.5\% \times 3$

$= \$60$ ✓

(b) A new car cost \$38 000. Herbie buys the car on the following terms:

5% deposit plus repayments of \$740 each month for 5 years.

(i) Deposit = $5\% \times 38000$

$= \$1900$ ✓

(ii) Repayments = $740 \times 12 \times 5$

$= \$44\,400$ ✓

(iii) How much interest did Herbie pay?

Interest = $1900 + 44\,400 - 38000$

$= \$8300$ ✓

[3marks]

(c) Use the formula $A = P(1 + r)^n$ to find the value of *A*, if \$5000 is invested at 5%*p.a.* for 5 years.
(Write your answer correct to the nearest cent)

$A =$ $5000(1 + 5\%)^5$

$= \$6381.41$ ✓

Question 3

(a) Is each statement **true** or **false**?

(i) The difference between $3x$ and 4 is $3x - 4$.

True ✓

(ii) Twice k plus 1 is $k^2 + 1$.

False ✓

(iii) The product of $2y$ and $3y$ is $5y^2$.

False ✓

[3 marks]

(b) Given that $g = -2$ and $h = 5$, find the value of:

(i) $g + h$ $-2 + 5 = 3$ ✓

(ii) $3h - g$ $3 \times 5 - -2 = 17$ ✓

(iii) $3g^2$ $3 \times (-2)^2 = 12$ ✓

[3 marks]

(c) Simplify each expression.

(i) $2m + m - 1 =$ $3m - 1$ ✓

(ii) $6gh - 4hg =$ $2gh$ or $2hg$ ✓

(iii) $6c \times (-3c) =$ $-18c^2$ ✓

(iv) $24x \div 6x =$ $\frac{24x}{6x} = 4$ ✓

[4 marks]

(d) Expand each expression.

(i) $4(x - 2) =$ $4x - 8$ ✓

(ii) $-3(4 + y) =$ $-12 - 3y$ ✓

[2 marks]

(e) Expand and simplify

$10(a+9)-5a =$ 10a + 90 - 5a ✓

= 5a + 90 ✓

[2 marks]

(f) Factorise

(i) $6mn+4m = 2m($ 3n $+$ 2 $)$ ✓

(ii) $-k^2-k =$ -k $(k+$ 1 $)$ ✓

[2 marks]

(g) Simplify

(i) $e^{12} \div e^3 =$ e^9 ✓

(ii) $3f^2 \times 2f^3 =$ $6f^5$ ✓

(iii) $(4g^5)^2 =$ $16g^{10}$ ✓

(iv) $4h^0 =$ 4 ✓

[4 marks]

(h) Write 3^{-2} as a fraction. $\frac{1}{3^2}$ or $\frac{1}{9}$ ✓

(i) Round 31 415 to 2 significant figures.

31 000 ✓

(j) Write each number in scientific notation.

(i) $16\,000\,000 = 1.6 \times 10^{7}$ ✓

(ii) $0.000\,789 =$ 7.89 $\times 10^{-4}$ ✓

[2 marks]

(k) Calculate $(1.2 \times 10^3) \times (4.5 \times 10^{-6})$

5.4×10^{-3} or 0.0054 ✓

Question 4

Complete each of the following equation steps.

(a) $a+9=15$

$a =$ 6 ✓

(b) $2c-5=21$

$2c =$ 26 ✓

$c =$ 13

(c) $5e-6=3e$

2e $= 6$ ✓

$e = 3$

(d) $4(g+3)=20$

$g+3 =$ 5 ✓

(e) $2k^2=32$

$k^2 =$ 16 ✓

$k =$ ±4 ✓

[2 marks]

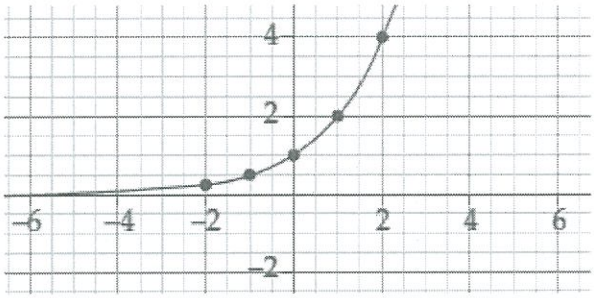
Question 5

(a) The graph of which of these equations is a **parabola**?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 1$

(b)

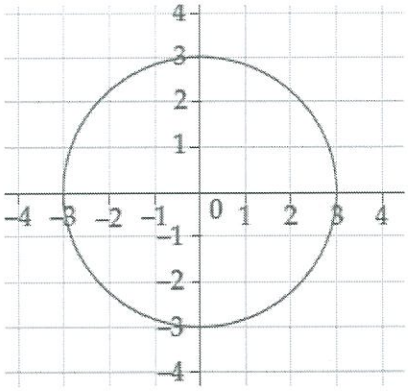


This is the graph of which of the following equations?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 1$

(c)



This is the graph of which of the following equations?

A. $y = x$ B. $y = x^2$

C. $y = 2^x$ D. $x^2 + y^2 = 9$

Question 6

(a) Complete each equivalent ratio.

(i) $4:3 =$ 16 $: 12$ ✓

(ii) $\frac{9}{2}:$ 1 $= 18:4$ ✓

[2 marks]

(b) Simplify each ratio.

(i) $60:200 =$ 3 : 10 ✓

(ii) $0.5:4.5 =$ 1 : 9 ✓

(iii) $12cm:90mm =$ 12 : 9

$=$ 4 : 3 ✓

[3 marks]

(c) The ratio of boys to girls in a class is 5: 3. If there are 15 boys in the class ← ×3

(i) How many girls are there?

3 × 3 = 9 girls. ✓

(ii) How many students are there in the class?

15 + 9 = 24 ✓

[2 marks]

(d) Benji is paid \$539 for working 35 hours most weeks.

(i) What is his hourly rate of pay?

Rate of pay = 539 ÷ 35 = \$15.40/hour ✓

(ii) How much would he earn if he works a 40 hour week?

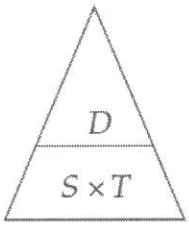
40 × 15.40 = \$616 ✓

(iii) How many hours will he need to work to earn $354.20?

$354.20 \div 15.40 = 23$ hours ✓

[3 marks]

(e) In a school zone, cars can travel a maximum of 40*km/h*.



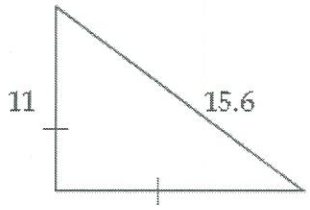
How many metres would a car travel in 3 seconds?

$D = S \times T = 40000 \times \frac{1}{3600} \times 3$

$= 33.3\text{m}$ ✓ *m*

Question 7

(a) Find the perimeter of this shape.



Perimeter = $11 + 11 + 15.6$

$= 37.6$ ✓

(b) Write the circle part that matches the sentence. (You do not need to use all the words, but you do need to **spell them correctly**)

Radius	Diameter	Circumference
Arc	Sector	Quadrant
Semicircle	Chord	Segment
Tangent		

(i) A line that touches the outside of the circle once.

Tangent ✓

(ii) A fraction of the circle's circumference.

Arc ✓

(iii) An interval from one edge of a circle to another edge, not through the centre.

Chord ✓

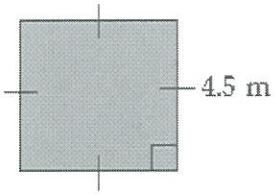
[3 marks]

(c) Use $C = \pi d$ to find the circumference of a circle with diameter 8*cm*. Write your answer correct to 1 decimal place.

Circumference = $\pi \times 8 = 25.1$ ✓ *cm*

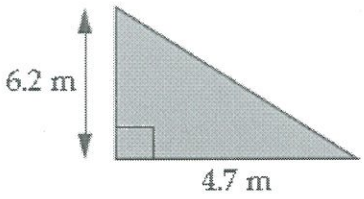
(d) Find the area of each shape.

(i)



Area = $4.5^2 = 20.25$ ✓ m^2

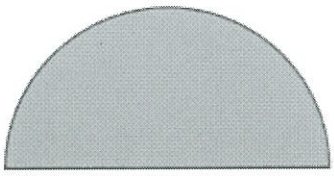
(ii)



✓

Area = $\frac{1}{2} \times 4.7 \times 6.2 = 14.57$ m^2

(iii)



Area = $\frac{1}{2} \times \pi \times r^2$

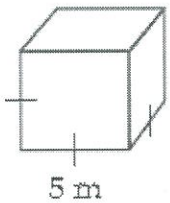
$= \frac{1}{2} \times \pi \times$ 4.25 ^{2} ✓

= 28.37 ✓ m^2

[4 marks]

(e) Use the given formula to find the surface area of each prism.

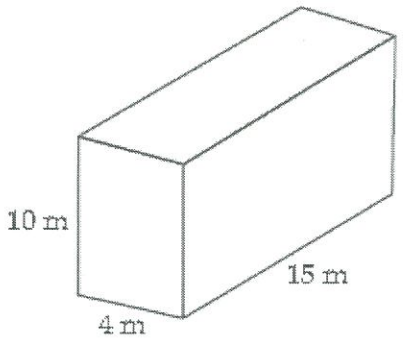
(i)



Surface area = $6 \times s^2$

= $6 \times 5^2 = 150$ ✓ m^2

(ii)



Surface area = $2 \times (l + b + h)$
($l = length, b = breadth, h = height$)

Surface area = $2 \times (15 + 4 + 10)$

$= 58$ ✓ m^2

[2 marks]

(f) A triangular prism is made up of 5 shapes.

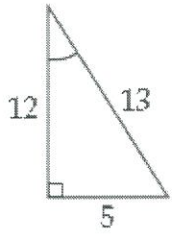
Two triangles ✓ s and

three rectangles ✓ s.

[2 marks]

Question 8

(a)

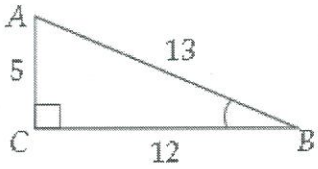


Hypotenuse = 13 ✓

Opposite side = 5 ✓

[2 marks]

(b)



Use ***SohCahToa*** to find each of the following fractions.

(i) $sinB =$ 5/13 ✓

(ii) $tanA =$ 12/5 ✓

[2 marks]

(c) Solve the following equations to find missing sides, correct to 1 decimal place.

(i) $cos40^\circ = \frac{x}{20}$

$x =$ 20 cos 40°

$=$ 15.3 ✓

(ii) $sin19.5^\circ = \frac{8.2}{y}$

$y =$ 8.2/sin 19.5

$=$ 313.3 ✓

[2 marks]

(d) Solve the following equations to find the missing angles.

(i) $tanA = 3.5$ (correct to the nearest degree)

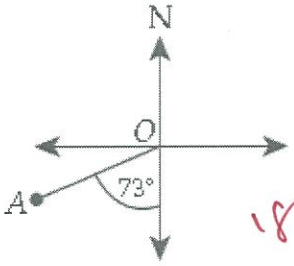
$A =$ tan⁻¹ 3.5 = 74° ✓

(ii) $sinB = \frac{45}{80}$ (correct to the nearest minute)

$B =$ 34° 14' ✓

[2 marks]

(e)



180 + 73

The bearing from O to A can be written as $S73^\circ W$, or as a three-figure bearing. ✓

The three-figure bearing is 2 5 3 °.

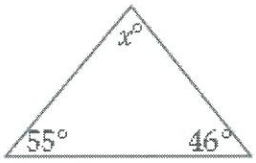
Question 9

(a) How many degrees do the angles of a triangle add up to?

A. 90° B. 180° ✓
C. 270° D. 360°

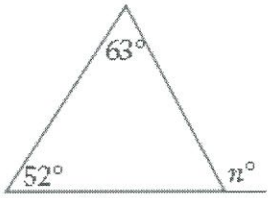
(b) Find the value of the pronumeral for each of these triangles.

(i)



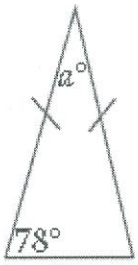
$x =$ 180 - 55 - 46 = 79° ✓

(ii)



$n =$ 52 + 63 = 115° ✓

(c) (i)



Find the value of the pronumeral.

$a =$ 180 - 78 - 78 = 24° ✓

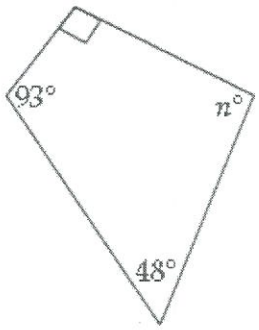
(ii) Complete the reason.

(Angles in an isosceles triangle ✓)

[2 marks]

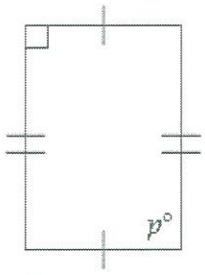
(b) Find the value of the pronumeral for each of these quadrilaterals.

(i)



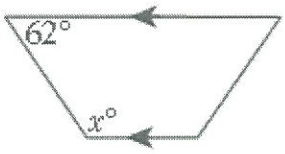
$n =$ 360 - 90 - 93 - 48 = 129° ✓

(ii)



$p =$ 90° ✓

(iii)

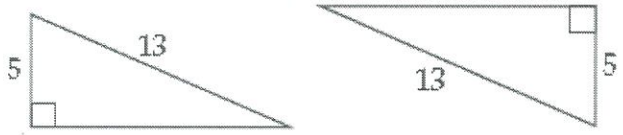


$x =$ 180 - 62 = 118° ✓

[3 marks]

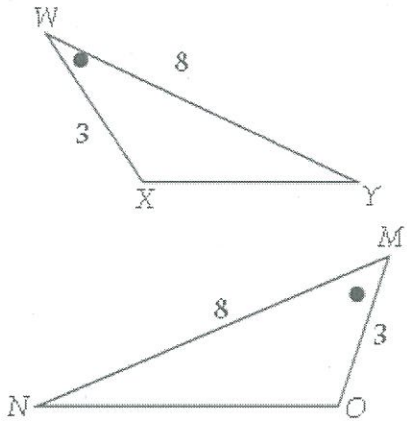
(c) Which test proves that these pairs of triangles are congruent? (Circle the correct answer)

(i)



SSS **SAS** **AAS** **RHS**

(ii)



SSS **SAS** **AAS** **RHS**

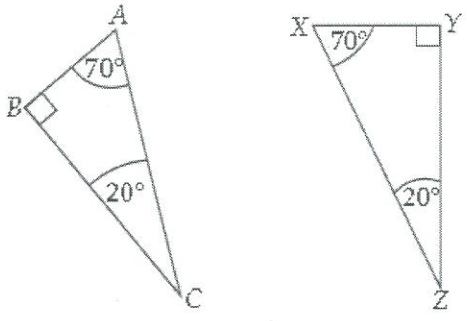
[2 marks]

(d) Which pair of shapes are always similar?

A. Two triangles B. Two rectangles

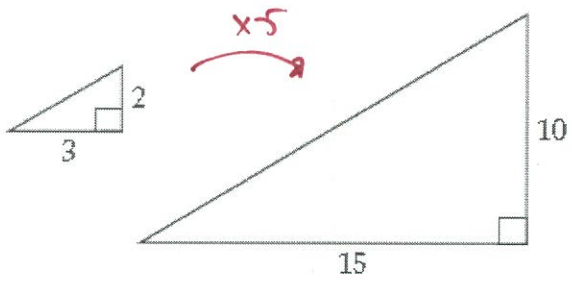
C. Two parallelograms D. Two squares

(e) This pair of triangles are similar.



Which side matches BC in ΔXYZ? Yz or ZY

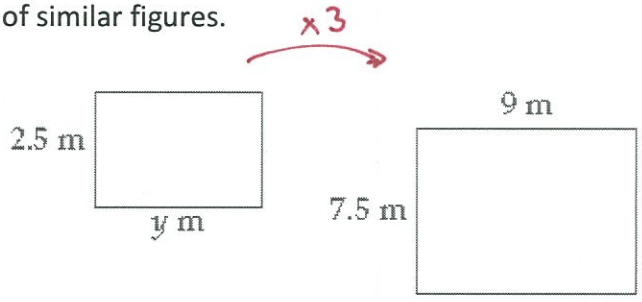
(f)



Find the scale factor for this enlargement.

Scale factor = 5

(g) Find the value of the pronumeral for this pair of similar figures.



y = 9 ÷ 3 = 3

Question 10

(a) For the data 3, 4, 4, 7, 9, 12, 12, 12 and 30, find the

(i) Mode = 12 ✓

(ii) Median = 9 ✓

(iii) Mean = 93 ÷ 9 ✓

= 10.3 (correct to 1 decimal place)

[3 marks]

(b)

Score	Frequency
3	4
4	12
5	8
6	8

For the scores in this frequency table, find the

Mode = 4 ✓

Median = 4.5 ✓

Relative frequency of 4.
(Write your answer as a decimal)

12/32 = 0.375 ✓

[3 marks]

(c) Find the range for the scores in this stem-and-leaf plot.

Stem	Leaf
4	3
5	2 6
6	4 5
7	3 4 7
8	1 6 8 9

Range = 89 − 43 = 46 ✓

Question 11

(a) When rolling a standard six-sided die, find the probability that the number that comes up is:

(i) 1. 1/6 ✓

(ii) Greater than 4. 2/6 or 1/3 ✓

(iii) A factor of 6. 4/6 or 2/3 ✓

1, 2, 3, 6

[3 marks]

(b) A packet contains a number of different coloured lollies:

52 red 36 green 12 yellow

One lolly is chosen at random. Calculate the following probabilities.

(i) $P(Red) =$ 52/100 or 13/25 ✓

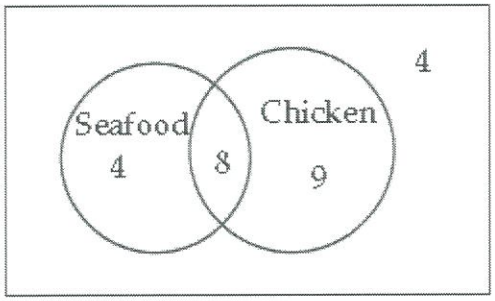
(ii) $P(Not\ Red) =$ 48/100 or 12/25 ✓

(iii) $P(Red\ or\ Green) =$ 88/100 or 22/25 ✓

(iv) $P(Blue) =$ 0 ✓

[4 marks]

(c) A number of students were surveyed to find out whether they liked chicken or seafood. The results are given in the Venn diagram.



(i) How many students were surveyed?

$4+8+9+4=25$ ✓

(ii) How many students liked seafood and chicken?

8 ✓

(iii) A student is chosen at random. What is the probability that they don't like chicken ~~or~~ ~~seafood~~ or seafood?

$4/25$ ✓

[3 marks]

END OF TEST

(Now, go back and check your answers!)