17

Class	Index Number	Name

新加坡海星中學

MARIS STELLA HIGH SCHOOL
SEMESTRAL EXAMINATION ONE
SECONDARY TWO

MATHEMATICS **13 May 2016**

Additional Materials: **2 hours**
Graph Paper (1 sheet)

INSTRUCTIONS TO CANDIDATES

Write your class, index number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a pencil for any diagrams or graphs.
Do not use paper clips, highlighters, glue or correction fluid.

Answer **all** questions.
If working is needed for any question, it must be shown with the answer.
Omission of essential working will result in loss of marks.
You are expected to use a scientific calculator to evaluate explicit numerical expressions.
If the degree of accuracy is not specified in the question, and if the answer is not exact, give your answer to three significant figures. Give answer in degrees to one decimal place.
For π, use either your calculator value or 3.142, unless the question requires the answer in terms of π.
The number of marks is given in brackets [ ] at the end of each question or part question.

For Examiner's Use		
Subtotal		80
Presentation		
Unit		
Rounding off		

This document consists of 12 printed pages, including the cover page.

www.exampaper.biz
Downloaded from SingaKids.com

Answer **all** the questions.

1. Solve the following simultaneous equations using either substitution or elimination method

$2x + 7y = -5$,
$2 + 3x = -5y$.

Answer $x =$ ..... $y =$.....[3]

---

2. Expand and simplify $2(3x - y)(5x + 2y) - 3x\,(2x - 3y)$.

Answer ..... [3]

---

www.exampaper.biz

Downloaded from SingaKids.com

3. Given that $x^2 + y^2 = 5$ and $xy = 3$, calculate the value of $(4x - 4y)^2 - 3(x - y)^2$.

Answer ..... [3]

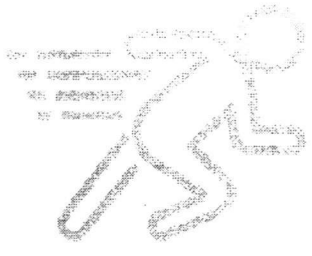
---

4. If $x = -2$ is a solution of the equation $3x^2 + kx + 14 = 0$, find

(a) the value of k,

Answer (*a*) k=..... [1]

(b) the other solution of the equation.



Answer (*b*) x=..... [2]

---

www.exampaper.biz

Downloaded from SingaKids.com

5. Without using a calculator, evaluate $3675^2 - 3680 \times 3670$ by using special algebraic identities.

Answer ..... [3]

---

6. **(a)** Solve the equation $13x - 2x^2 - 21 = 0$.

Answer (*a*) x = ...or..... [2]

(b) Hence, use your results in **(a)** to solve $65p - 50p^2 - 21 = 0$.

Answer (*b*) p =.....or..... [3]

---

www.exampaper.biz

Downloaded from SingaKids.com

7. The following is a set of 12 numbers.

1, 13, 4, 7, 5, 9, 12, 4, 8, 10, 4, 12

(a) Find the median of the numbers.

Answer (*a*) Median = ... [2]

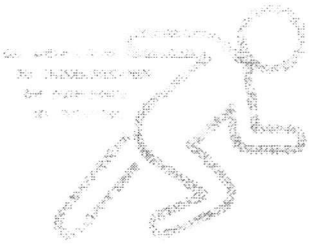
(b) When the number x is added to the above set, the new mean is 8. Calculate the value of x.

Answer (*b*) x = ... [2]

---

8. The total monthly charges, $\$C$, for a mobile phone line consist of a fixed amount of \$28 and a variable amount which depends on the duration of the outgoing calls. Outgoing calls for the first 100 minutes are free. Thereafter, outgoing calls are charged at \$0.08 per minute.

(a) If the total duration of outgoing calls is 400 minutes, find the total monthly charges for the mobile phone line.



Answer (*a*) \$..... [2]

---

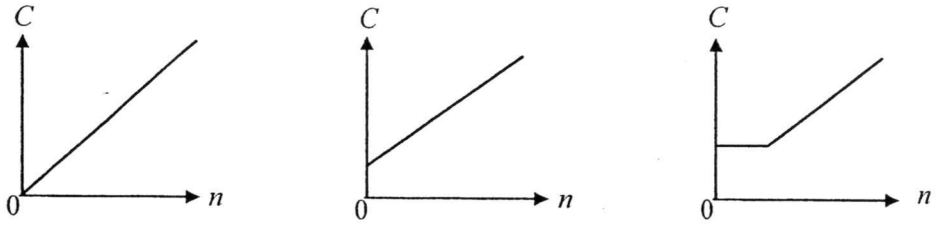
www.exampaper.biz

Downloaded from SingaKids.com

(b) If the total monthly charges for the mobile phone line are \$38, calculate the total duration of outgoing calls in minutes.

Answer (*b*) .....minutes [2]

(c) Let n minutes be the duration of outgoing calls. Which one of the following graphs illustrates the relationship between C and n?



(A) (B) (C)

Answer (*c*)..... [1]

---

9. There are two numbers. When the second number is subtracted from twice the first number, the result is 3. When 9 is added to the first number, the result is equal to twice the second number.

(a) Using x to represent the first number and y as the second number, write down a pair of simultaneous equations.

Answer (*a*) .....

..... [2]

(b) Hence, find the two numbers x and y.

Answer (*b*) x = ... y = ...[3]

---

www.exampaper.biz

Downloaded from SingaKids.com

10. A survey is conducted to find out the number of hours spent on watching TV over a weekend by a group of children. The results are recorded in the following table.

No. of hours	1	2	3	4	5	6
No. of children	5	8	x	9	5	4

(a) If the median of the distribution is 4, find the possible values of x.

Answer (*a*) x =..... [2]

(b) If the modal number of hours is 3, find the smallest possible value of x.

Answer (*b*) x = ... [1]

(c) If $x = 4$, find the mean number of hours.

Answer (*c*) .....hours [2]

---

11. The stem-and-leaf diagram shows the scores of the students for a Mathematics test.

Stem	Leaf
3	5 7 8 9 9
4	5 5 6 7 7 8 8
5	2 2 3 3 3 4 5 5 7 8
6	1 2 6 7 8
7	0 2 8

Key: 3 | 8 represents 38 marks

(a) Find the number of students who took the test.

Answer (*a*)..... [1]

(b) What is the lowest mark and highest mark for the test?

Answer (*b*) lowest mark =.....

highest mark =..... [2]

---

www.exampaper.biz

Downloaded from SingaKids.com

(c) Given that 30% of the students scored distinctions for the test, find the minimum mark needed to score a distinction.

Answer: (*c*) ..... [2]

---

12. Given that y is inversely proportional to the square of x and that $y = 1$ when $x = 3$,

(a) Find the value(s) of x when $y = 0.25$,

Answer (*a*) x =..... [2]

(b) Find the percentage change in y when x increases by 100%.

Answer (*b*) .....% [3]

---

13. The table below shows the amount of time taken by 30 students to travel to school.

20	24	29	15	19	23
26	13	17	22	32	16
31	33	27	18	28	28
19	21	16	29	34	19
27	33	30	16	18	33

---

www.exampaper.biz

Downloaded from SingaKids.com

(a) Complete the frequency table below. [2]

Time (min)	No. of students
$10 < x \leq 15$	
$15 < x \leq 20$	
$20 < x \leq 25$	
$25 < x \leq 30$	
$30 < x \leq 35$	

(b) Draw a histogram to illustrate the data in the spaces provided. [3]

(c) Calculate an estimate for the mean time taken by the students to travel to school.

Answer (*c*) .....minutes [2]

(d) Give a reason to suggest why a dot diagram is not appropriate to represent the above data.

Answer (*d*).....

..... [1]

www.exampaper.biz

Downloaded from SingaKids.com

14. **(a)** Ryan ran a 10 km race at an average speed of x km/h.
Write down an expression, in terms of x, for the number of hours he took to complete the race.

Answer (*a*) ..... [1]

(b) Jeremy ran the same race at an average speed which was 0.5 km/h more than Ryan's speed. Write down an expression, in terms of x, the number of hours which he took.

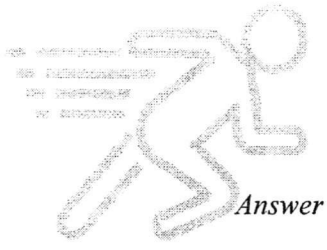
Answer (*b*) ..... [1]

(c) Given that the difference between the two timings was 5 minutes, write down an equation in x to represent this information, and show that it reduces to $2x^2 + x - 120 = 0$.

Answer (*c*)

[3]

(d) Solve the equation $2x^2 + x - 120 = 0$ and find in hours, the time taken by Ryan to complete the race.



Answer (*d*) .....hours [3]

www.exampaper.biz

Downloaded from SingaKids.com

15. Factorise the following expressions completely

(a) $3a^2 - 27$,

Answer (a) ..... [2]

(b) $8b^2 + 2bc - 6c^2$,

Answer (b) .....[2]

(c) $d^2 - 4e^2 + 2d + 4e$.

Answer (c) ..... [2]

www.exampaper.biz

Downloaded from SingaKids.com

16. **Answer the whole of this question on a single sheet of graph paper.**
The following table shows some corresponding values of x and y for $y = x^2 - 6x + 7$ for $0 \leq x \leq 6$.

x	0	1	2	3	4	5	6
y	7	2	−1	−2	−1	p	7

(a) Calculate the value of p. [1]

(b) Using a scale of 2 cm to represent 1 unit on the x-axis and 2 cm to represent 1 unit on the y-axis, draw the graph of $y = x^2 - 6x + 7$ for $0 \leq x \leq 6$. [3]

(c) Draw and label the line of symmetry of $y = x^2 - 6x + 7$ clearly on the graph. [1]

(d) On the same axis in **(b)**, draw the graph $y = x + 1$. [2]

(e) Hence, find the solutions to the equation $x^2 - 7x + 8 = 2$. [2]

END OF PAPER

www.exampaper.biz
Downloaded from SingaKids.com

Class	Index Number	Name

新加坡海星中學

MARIS STELLA HIGH SCHOOL
SEMESTRAL EXAMINATION ONE
SECONDARY TWO

MATHEMATICS **13 May 2016**

Additional Materials: **2 hours**
Graph Paper

INSTRUCTIONS TO CANDIDATES

Write your class, index number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a pencil for any diagrams or graphs.
Do not use paper clips, highlighters, glue or correction fluid.

Answer **all** questions.
If working is needed for any question, it must be shown with the answer.
Omission of essential working will result in loss of marks.
You are expected to use a scientific calculator to evaluate explicit numerical expressions.
If the degree of accuracy is not specified in the question, and if the answer is not exact, give your answer to three significant figures. Give answer in degrees to one decimal place.
For π, use either your calculator value or 3.142, unless the question requires the answer in terms of π.
The number of marks is given in brackets [ ] at the end of each question or part question.

For Examiner's Use		
Subtotal		80
Presentation		
Unit		
Rounding off		

This document consists of **12** printed pages, including the cover page.

www.exampaper.biz
Downloaded from SingaKids.com

www.exampaper.biz
Downloaded from SingaKids.com

www.exampaper.biz

Answer **all** the questions.

1. Solve the following simultaneous equations using either substitution or elimination method

$2x + 7y = -5$,
$2 + 3x = -5y$.

Solution: $2x + 7y = -5$ ----------(1)
$2 + 3x = -5y$----------(2)

By elimination method.
(1) x 3 – (2) x 2.

$21y - 4 = -15 + 10y$ (M1)
$11y = -11$
$y = -1$ (A1)
Subst $y = -1$ to (1).
$2x - 7 = -5$
$x = 1$ (A1)

By substitution method.
or from (1). $y = \dfrac{-5-2x}{7}$ -------(3)
Subst (3) to (2),

$2 + 3x = \dfrac{-5(-5-2x)}{7}$ (M1)
$14 + 21x = 25 + 10x$
$x = 1$ (A1)

Subst $x = 1$ to (3), $y = \dfrac{-5-2(1)}{7}$
$y = -1$ (A1)

Therefore $x = 1$, $y = -1$

Max 1 P if never write (1) x 3 – (2) x 2 or Subst (3) to (2) etc.

Answer $x =$ **1** $y =$ **–1** [3]

---

2. Expand and simplify $2(3x - y)(5x + 2y) - 3x(2x - 3y)$.

Solution:

$2(3x - y)(5x + 2y) - 3x(2x - 3y)$
$= (6x - 2y)(5x + 2y) - 6x^2 + 9xy$ (M1)
$= 30x^2 + 12xy - 10xy - 4y^2 - 6x^2 + 9xy$ (M1)
$= 24x^2 + 11xy - 4y^2$ (A1)

Answer **$24x^2 + 11xy - 4y^2$** [3]

REPRODUCTION OF ANY PART OF THIS QUESTION PAPER WITHOUT PERMISSION IS STRICTLY PROHIBITED.

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

3. Given that $x^2 + y^2 = 5$ and $xy = 3$, calculate the value of $(4x - 4y)^2 - 3(x - y)^2$.

Solution:

$16(x - y)^2 - 3(x - y)^2$ (M1)
$= 13(x^2 + y^2 - 2xy)$ (M1)
$= 13[5 - 2(3)]$
$= -13$ (A1)

or $16x^2 - 32xy + 16y^2 - 3(x^2 - 2xy + y^2)$ (M1)
$= 16x^2 - 32xy + 16y^2 - 3x^2 + 6xy - 3y^2$
$= 13x^2 - 26xy + 13y^2$
$= 13(x^2 + y^2) - 26xy$ (M1)
$= 13(5) - 26(3)$
$= -13$ (A1)

Answer ..... **–13** ..... [3]

---

4. If $x = -2$ is a solution of the equation $3x^2 + kx + 14 = 0$, find

(a) the value of k,

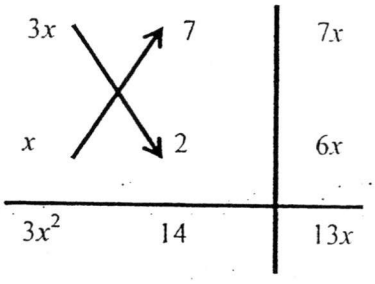
Solution:

$3(-2)^2 + k(-2) + 14 = 0$
$12 - 2k + 14 = 0$
$k = 13$ (B1)

Answer (*a*) $k =$ ..... **13** ..... [1]

(b) the other solution of the equation.

$3x^2 + 13x + 14 = 0$



$(3x + 7)(x + 2) = 0$ (M1)
$\therefore x = -2\frac{1}{3}$ or -2 (A1)

Answer (*b*) $x = -2\frac{1}{3}$ ..... [2]

---

www.exampaper.biz
Downloaded from SingaKids.com

www.exampaper.biz

5. Without using a calculator, evaluate $3675^2 - 3680 \times 3670$ by using special algebraic identities.

Solution:

$3675^2 - 3680 \times 3670$

$=3675^2 - (3675+5) \times (3675-5)$ (M1)

$=3675^2 - (3765^2-5^2)$ (M1)

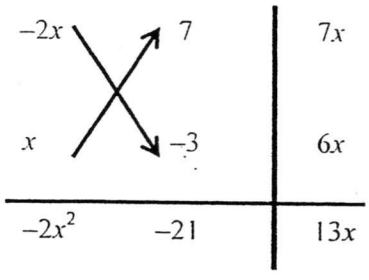
$= 25$ (A1)

Answer 25 [3]

---

6. **(a)** Solve the equation $13x - 2x^2 - 21 = 0$.

Solution:



(M1)

$(-2x+7)(x-3) = 0$

$x = 3.5$ or 3 ($A\frac{1}{2}$ for each answer)

Answer (*a*) $x=$ 3.5 or 3 [2]

(b) Hence, use your results in **(a)** to solve $65p - 50p^2 - 21 = 0$.

$13(5p) - 2(5p)^2 - 21 = 0$ (M1)

Comparing $x = 5p$,

$5p = 3.5$ or 3 (M1)

$p = 0.7$ or 0.6 (A1)

Answer (*b*) $p=$ 0.7 or 0.6 [3]

---

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

7. The following is a set of 12 numbers.

1, 13, 4, 7, 5, 9, 12, 4, 8, 10, 4, 12

(a) Find the median of the numbers.

Solution:

1, 4, 4, 4, 5, 7, 8, 9, 10, 12, 12, 13 (M1)

Middle position = $\frac{12+1}{2}$

Therefore the median lies in the 6^{th} and 7^{th} term.

Median= $\frac{7+8}{2}$

= 7.5 (A1)

Answer (*a*) Median = 7.5 [2]

(b) When the number x is added to the above set, the new mean is 8. Calculate the value of x.

$$\frac{1+13+4+7+5+9+12+4+8+10+4+12+x}{13} = 8$$

$89 + x = 13(8)$ (M1)

$x = 15$ (A1)

Answer (*b*) x = 15 [2]

---

8. The total monthly charges, $\$C$, for a mobile phone line consist of a fixed amount of \$28 and a variable amount which depends on the duration of the outgoing calls. Outgoing calls for the first 100 minutes are free. Thereafter, outgoing calls are charged at \$ 0.08 per minute.

(a) If the total duration of outgoing calls is 400 minutes, find the total monthly charges for the mobile phone line.

Solution:

Total monthly charges = \$28 + (400– 100) \$0.08 (M1)

= \$28 + \$24

= \$52 (A1)

Answer (*a*) \$ 52 [2]

---

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

(b) If the total monthly charges for the mobile phone line are \$38, calculate the total duration of outgoing calls in minutes.

P if didn't write "Duration of usage"

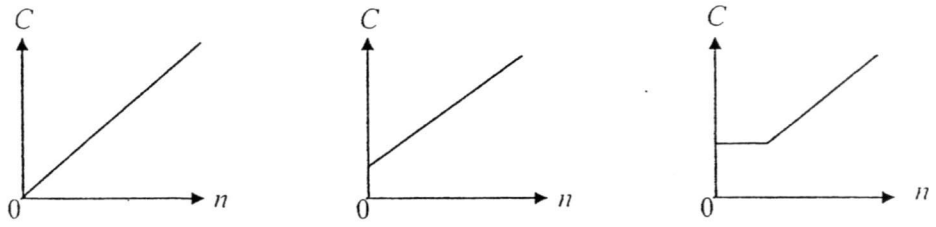
Duration of usage $= 100 + \frac{38-28}{0.08}$ (M1)

$= 100 + 125$

$= 225$ min (A1)

Answer (*a*) 225 minutes [2]

(c) Let n minutes be the duration of outgoing calls. Which one of the following graphs illustrates the relationship between C and n?



(A) (B) (C)

Answer (*c*) C [1]

---

9. There are two numbers. When the second number is subtracted from twice the first number, the result is 3. When 9 is added to the first number, the result is equal to twice the second number.

(a) Using x to represent the first number and y as the second number, write down a pair of simultaneous equations.

Answer (*a*) $2x - y = 3$-------**(1)**

$x + 9 = 2y$------**(2)**[2]

(b) Hence, find the two numbers x and y.

Solution:

From (2), $x = 2y - 9$--------(3)

Subst (3) to (1),

$2(2y - 9) - y = 3$ (M1)

$3y = 21$

$y = 7$ (A1)

Subst $y = 7$ to (3),

$x = 2(7) - 9$

$= 5$ (A1)

Max 1 P if never indicate the steps clearly, eg. "Subst"

Answer (*b*) $x =$ 5 $y =$ 7 [3]

---

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

10. A survey is conducted to find out the number of hours spent on watching TV over a weekend by a group of children. The results are recorded in the following table.

No. of hours	1	2	3	4	5	6
No. of children	5	8	x	9	5	4

(a) If the median of the distribution is 4, find the possible values of x.

Solution:

for smallest value of x
$5+8+x = 8+5+4$
$x = 4$

for greatest value of x
$5+8+x-8 = 5+4$
$x = -12$

possible value of $x = 0, 1, 2, 3, 4$ (B2)

***1 or 2 missing or extra values* (minus 1 mark)**
more than 2 missing or extra values, NO mark

Answer (a) $x =$ **0, 1, 2, 3, 4** [2]

(b) If the modal number of hours is 3, find the smallest possible value of x.

Answer (b) $x =$ **10** [1]

(c) If $x = 4$, find the mean number of hours.

$$\text{Mean} = \frac{1\times5+2\times8+3\times4+4\times9+5\times5+6\times4}{5+8+4+9+5+4} \quad \text{(M1)}$$

$$= 3.37\text{hrs or } 3\frac{13}{35} \quad \text{(A1)}$$

Answer (c) 3.37 or $3\frac{13}{35}$ hours [2]

---

11. The stem-and-leaf diagram shows the scores of the students for a Mathematics test.

Stem	Leaf
3	5 7 8 9 9
4	5 5 6 7 7 8 8
5	2 2 3 3 3 4 5 5 7 8
6	1 2 6 7 8
7	0 2 8

Key: 3 | 8 represents 38 marks

(a) Find the number of students who took the test.

Answer (a) **30** [1]

(b) What is the lowest mark and highest mark for the test?

Answer (b) lowest mark = **35**

highest mark = **78** [2]

---

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

(c) Given that 30% of the students scored distinctions for the test, find the minimum mark needed to score a distinction.

Solution:

No. of students who scored distinction=0.30 × 30

$= 9$ (M1)

From the stem and leaf diagram, min mark is 58 (A1)

Answer: (c) 58 [2]

---

12. Given that y is inversely proportional to the square of x and that $y = 1$ when $x = 3$.

(a) Find the value(s) of x when $y = 0.25$,

Solution:

$y = \frac{k}{x^2}$, where k is a constant

when $y_1 = 1$, $x_1 = 3$, and $y = 0.25$,

$0.25\,x^2 = 1\,(3)^2$ (M1)

$x = \pm 6$ (A1)

or when $y = 1$, $x = 3$,

$1 = \frac{k}{9}$

$k = 9$ (M1)

$y = 0.25$,

$0.25 = \frac{9}{x^2}$

$x = \pm 6$ (A1)

Answer (a) $x =$ ± 6 [2]

(b) Find the percentage change in y when x increases by 100%.

$x_{new} = 2x$, $y_{new} = \frac{k}{(2x)^2}$ (M1)

% change in $y = \frac{\frac{k}{(2x)^2} - \frac{k}{x^2}}{\frac{k}{x^2}} \times 100\%$ (M1)

$= -\frac{3}{4} \times 100\%$

$= -75\%$ (A1)

or $x_{new} = 6$, $y_{new} = \frac{k}{(6)^2}$ (M1)

% change in $y = \frac{\frac{9}{36} - \frac{9}{9}}{\frac{9}{9}} \times 100\%$

$= -\frac{3}{4} \times 100\%$

$= -75\%$ (A1)

Answer (b) –75 % [3]

---

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

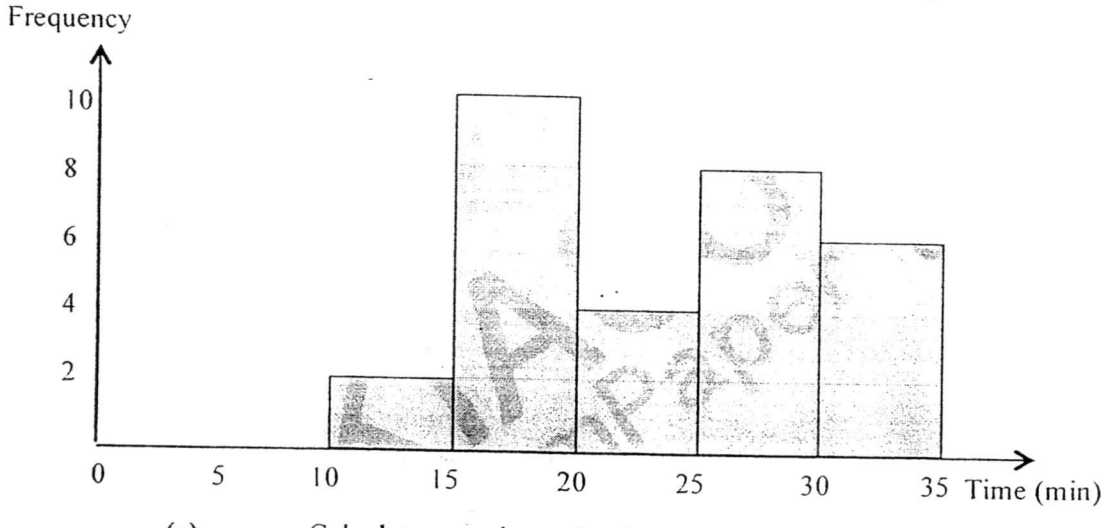
13. The table below shows the amount of time taken by 30 students to travel to school.

20	24	29	15	19	23
26	13	17	22	32	16
31	33	27	18	28	28
19	21	16	29	34	19
27	33	30	16	18	33

(a) Complete the frequency table below. [2]

Time (min)	No. of students
$10 < x \leq 15$	**2**
$15 < x \leq 20$	**10**
$20 < x \leq 25$	**4**
$25 < x \leq 30$	**8**
$30 < x \leq 35$	**6**

(b) Draw a histogram to illustrate the data in the spaces provided. [3]



(c) Calculate an estimate for the mean time taken by the students to travel to school.

Solution:

$$\text{Mean time} = \frac{2\times12.5+10\times17.5+4\times22.5+8\times27.5+6\times32.5}{30}$$

$$= \frac{705}{30}$$

$$= 23.5 \text{ min}$$

Answer (*c*) **23.5** minutes [2]

(d) Give a reason to suggest why a dot diagram is not appropriate to represent the above data.

Answer (*d*) **A dot diagram is not appropriate as there are too many values to be presented in the diagram** [1]

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

14. **(a)** Ryan ran a 10 km race at an average speed of x km/h.
Write down an expression, in terms of x, for the number of hours he took to complete the race.

Answer (a) $\frac{10}{x}$ [1]

(b) Jeremy ran the same race at an average speed which was 0.5 km/h more than Ryan's speed. Write down an expression, in terms of x, the number of hours which he took.

Answer (b) $\frac{10}{x+0.5}$ [1]

(c) Given that the difference between the two timings was 5 minutes, write down an equation in x to represent this information, and show that it reduces to $2x^2 + x - 120 = 0$.

Answer (c)

$\frac{10}{x} - \frac{10}{x+0.5} = \frac{5}{60}$ (M1)

$5 = \frac{1}{12}x(x+0.5)$ (M1)

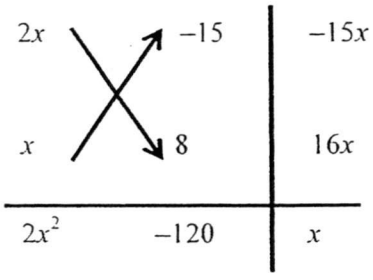
$60 = x^2 + 0.5x$

$2x^2 + x - 120 = 0$ (shown) (A1)

[3]

(d) Solve the equation $2x^2 + x - 120 = 0$ and find in hours, the time taken by Ryan to complete the race.

Solution:



(M1)

$(2x - 15)(x + 8) = 0$

$x = -8$ (NA) or 7.5 (M1)

time taken $= \frac{10}{7.5}$

$= 1\frac{1}{3}$ hrs (A1)

Answer (d) $1\frac{1}{3}$ hours [3]

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

15. Factorise the following expressions completely

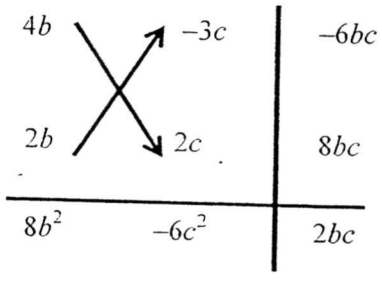
(a) $3a^2 - 27$.

Solution:

$3a^2 - 27$
$= 3(a^2 - 9)$ (M1)
$= 3(a-3)(a+3)$ (A1)

Answer (a) 3(a–3) (a +3) [2]

(b) $8b^2 + 2bc - 6c^2$.



(M1)

$(4b-3)(2b+2c) = 2(4b-3c)(b+c)$ (A1)

Answer (b) 2(4b –3c)(b +c) [2]

(c) $d^2 - 4e^2 + 2d + 4e$.

$d^2 - 4e^2 + 2d + 4e$
$= (d+2e)(d-2e) + 2(d+2e)$ (M1)
$= (d+2e)(d-2e+2)$ (A1)

Answer (c) (d + 2e) (d– 2e +2)[2]

www.exampaper.biz

Downloaded from SingaKids.com

www.exampaper.biz

16. **Answer the whole of this question on a single sheet of graph paper.**
The following table shows some corresponding values of x and y for $y = x^2 - 6x + 7$ for $0 \leq x \leq 6$.

x	0	1	2	3	4	5	6
y	7	2	−1	−2	−1	p	7

(a) Calculate the value of p. [1]

(b) Using a scale of 2 cm to represent 1 unit on the x-axis and 2 cm to represent 1 unit on the y-axis, draw the graph of $y = x^2 - 6x + 7$ for $0 \leq x \leq 6$. [3]

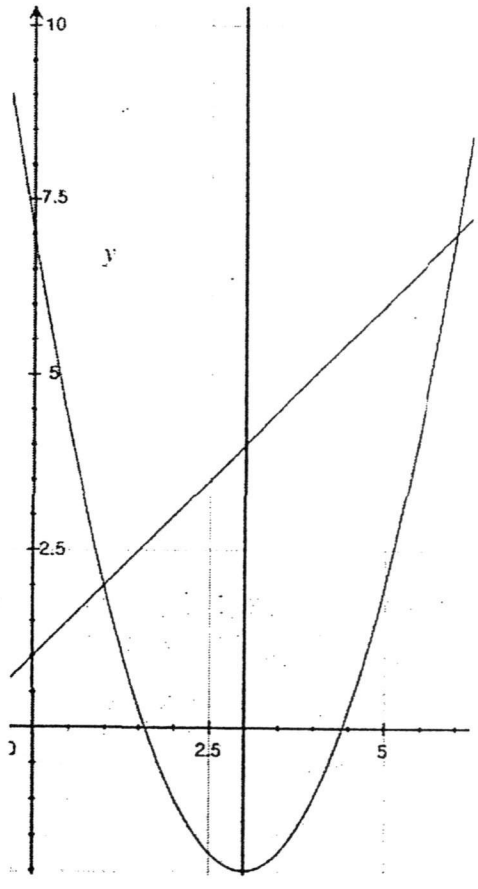
(c) Draw and label the line of symmetry of $y = x^2 - 6x + 7$ clearly on the graph. [1]

(d) On the same axis in **(b)**, draw the graph $y = x + 1$. [2]

(e) Hence, find the solutions to the equation $x^2 - 7x + 8 = 2$. [2]

END OF PAPER

(a) $p = 2$
(b) As shown.
(c) Line of symmetry $x = 3$
(d) As shown
(e) $x^2 - 7x + 8 = 2$
$x^2 - 6x + 7 = x + 1$
From the graph,
$x = 2$, $x = 7$



www.exampaper.biz
Downloaded from SingaKids.com