

Student No.

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Name: _____

Class: 11MTA21_____

CHERRYBROOK TECHNOLOGY HIGH SCHOOL



2021

YEAR 11

AP2

MATHEMATICS ADVANCED

Time allowed – 1 hour and 30 minutes

**General
Instructions**

- Attempt all questions and clearly label them
- Write your full name on each page of your solutions
- Write using blue or black pen
- NESA approved calculators may be used
- The NESA reference sheet has been provided
- For questions in Section II, show relevant mathematical reasoning and/or calculations

**Total marks:
50**

Section I – 10 marks (pages 2 – 6)

- Attempt Questions 1-10
- Allow about 15 minutes for this section

Section II – 40 marks (pages 7 – 18)

- Attempt Questions 11-24
- Allow about 1 hour and 15 minutes for this section

Section I

10 marks

Attempt questions 1 - 10

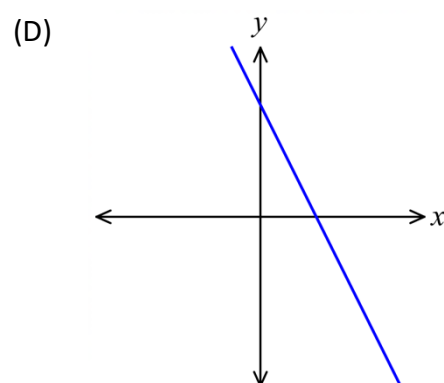
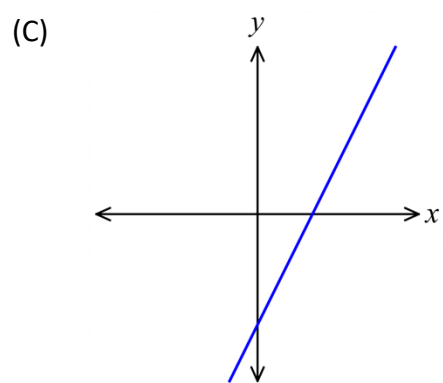
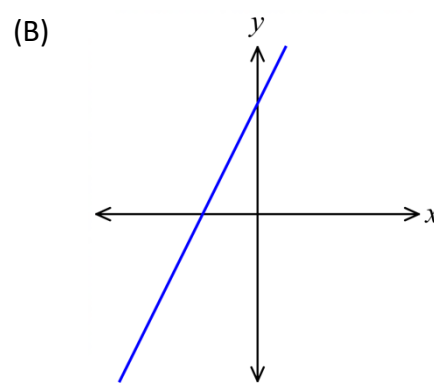
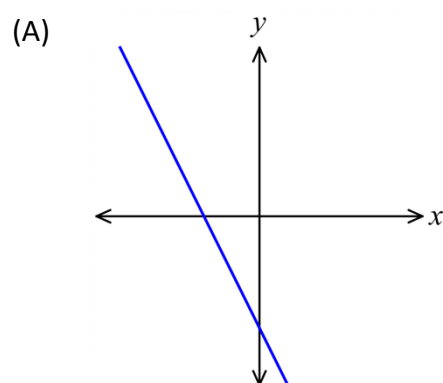
Allow about 15 minutes for this section

Clearly indicate your multiple-choice answers in your solutions.

1. Which of the following is true for the function $f(x) = \frac{3}{x^2} - 2$?

- (A) Even function
- (B) Odd function
- (C) Zero function
- (D) Neither an even, odd or zero function

2. Which one of the following graphs could represent the line with equation $2x - y = 3$?



3. Evaluate $\log_7 \frac{1}{49}$.

- (A) -7
- (B) -2
- (C) 2
- (D) 7

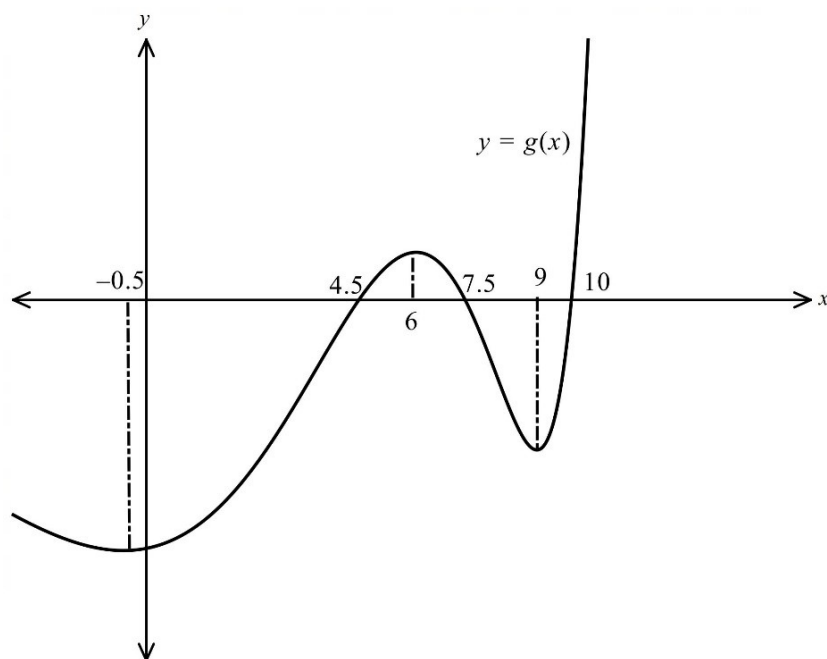
4. Solve the equation $\frac{4}{\sqrt{x}} - 9 = 0$

- (A) $x = \frac{16}{81}$
- (B) $x = \frac{8}{18}$
- (C) $x = \frac{2}{3}$
- (D) $x = 6$

5. What is the exact value of $\sin 135^\circ + \frac{1}{\sin 60^\circ}$?

- (A) $\frac{2\sqrt{2} - \sqrt{3}}{\sqrt{6}}$
- (B) $\frac{2\sqrt{2} - 1}{\sqrt{2}}$
- (C) $\frac{2\sqrt{2} + \sqrt{3}}{\sqrt{6}}$
- (D) $\frac{2\sqrt{2} + 1}{\sqrt{2}}$

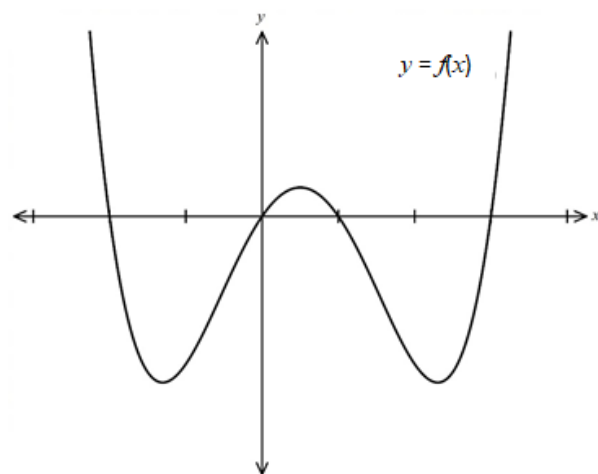
6. The graph of $y = g(x)$ is shown below.
For what values of x is $g(x)$ increasing?



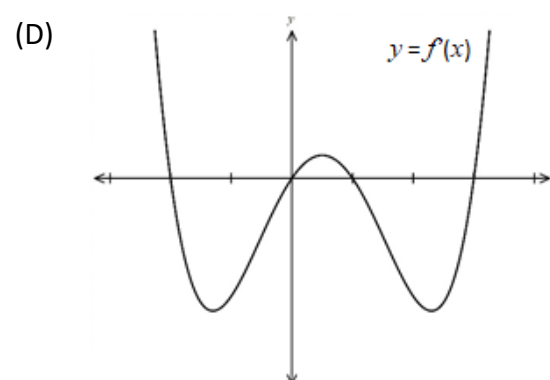
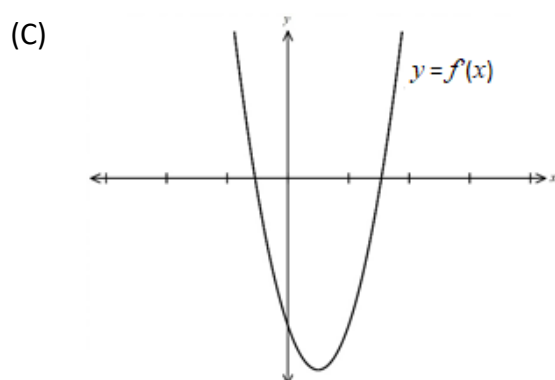
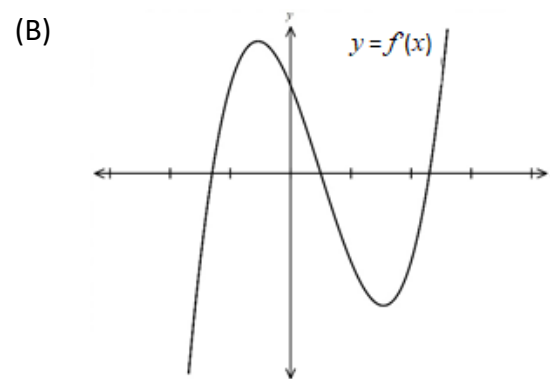
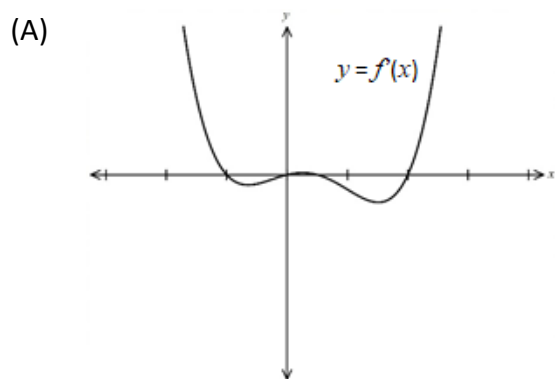
- (A) $(-0.5, 6) \cup (9, \infty)$
- (B) $(-0.5, 4.5) \cup (7.5, \infty)$
- (C) $(4.5, 7) \cup (10, \infty)$
- (D) $(-\infty, -0.5) \cup (6, 9)$
7. Which of the following is the most simplified with a rational denominator equivalent to $\frac{\sqrt{208}}{\sqrt{108}}$?

- (A) $\frac{\sqrt{52}}{\sqrt{27}}$
- (B) $\frac{2\sqrt{39}}{9}$
- (C) $\frac{2\sqrt{13}}{3\sqrt{3}}$
- (D) $\frac{\sqrt{156}}{3}$

8. The graph of $y = f(x)$ is shown below.



Which graph could represent $y = f'(x)$?



9. It is assumed that the number $N(t)$ of ants in a certain nest at time (t) is given by:

$$N(t) = \frac{A}{1+e^{-t}} \text{ where } A \text{ is a constant and } t \text{ is measured in months.}$$

At time $t = 0$, $N(t)$ is estimated at 2×10^5 ants. What is the value of A ?

- (A) 2×10^{-5}
 - (B) 2×10^5
 - (C) 4×10^{-5}
 - (D) 4×10^5
10. The function $f(x) = \ln(2x^{-1})$ can be graphed by applying which transformations to the graph of $g(x) = \ln x$?
- (A) A reflection in the y-axis, then a vertical translation of $\ln 2$
 - (B) A reflection in the x-axis, then a vertical translation of $\ln 2$
 - (C) A reflection in the x-axis, then a horizontal translation of $\ln 2$
 - (D) A reflection in the y-axis, then a horizontal translation of $\ln 2$

End of Section 1

Section II

40 marks

Attempt all questions

Allow about 1 hour and 15 minutes for this section

- Instructions**
- Answer the questions on blank paper or in the spaces provided. These spaces provide guidance for the expected length of response.
 - Your responses should include relevant mathematical reasoning and/or calculations.
 - Ensure your questions are clearly labelled and submitted in the correct order.
-

Question 11 (2 marks)

Marks

Given that $f(x) = 2x^2 - x$ and $g(x) = 2x - 3$, write an expression for $f(g(x))$ given in the form $ax^2 + bx + c$, where a , b and c are integers.

2

Question 12 (2 marks)

Solve the equation

2

$$5\log_{10}x = 3 + 2\log_{10}x$$

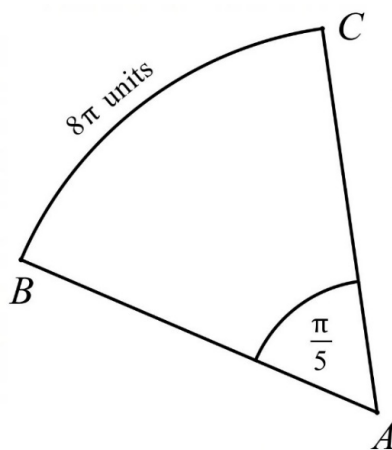
Question 13 (2 marks)

Marks

A sector of a circle is shown below. Point A is the centre of the circle and $\angle BAC = \frac{\pi}{5}$ radians.

2

The arc BC has a length of 8π units.



Find the area of the sector. (Give your answer in terms of π)

See over for Question 14

Question 14 (1 mark)**Marks**

Given $\sin \theta = \frac{7}{12}$ for an obtuse angle θ , find the exact value of $\cos \theta$.

1

Question 15 (2 marks)

Solve $|2x - 3| = 15$

2

See over for Question 16

Question 16 (3 marks)

Marks

Use algebra to solve the following simultaneous equations:

3

$$y = x - 2$$

$$y^2 + x^2 = 10$$

[illegible]

See over for Question 17

Question 17 (4 marks)

Marks

Let $3x^2 + 12x - 24 = 3(x + a)^2 + b$ where a and b are constants.

- (a) Find the value of a and b .

2

- (b) Hence, determine the **vertex** and the x – **intercepts** for the function $f(x) = 3x^2 + 12x - 24$. Express your answer for the x – intercepts in the form $c \pm d\sqrt{3}$ where c and d are integers.

2

See over for Question 18

Question 18 (4 marks)**Marks**Differentiate, with respect to x .

(a) $(5x^2 - 3)^4$

2

(b) $\frac{3x^2 - 4}{x + 5}$

2

See over for Question 19

Questions 11-18 are worth 20 marks in total
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Question 19 (3 marks)**Marks**

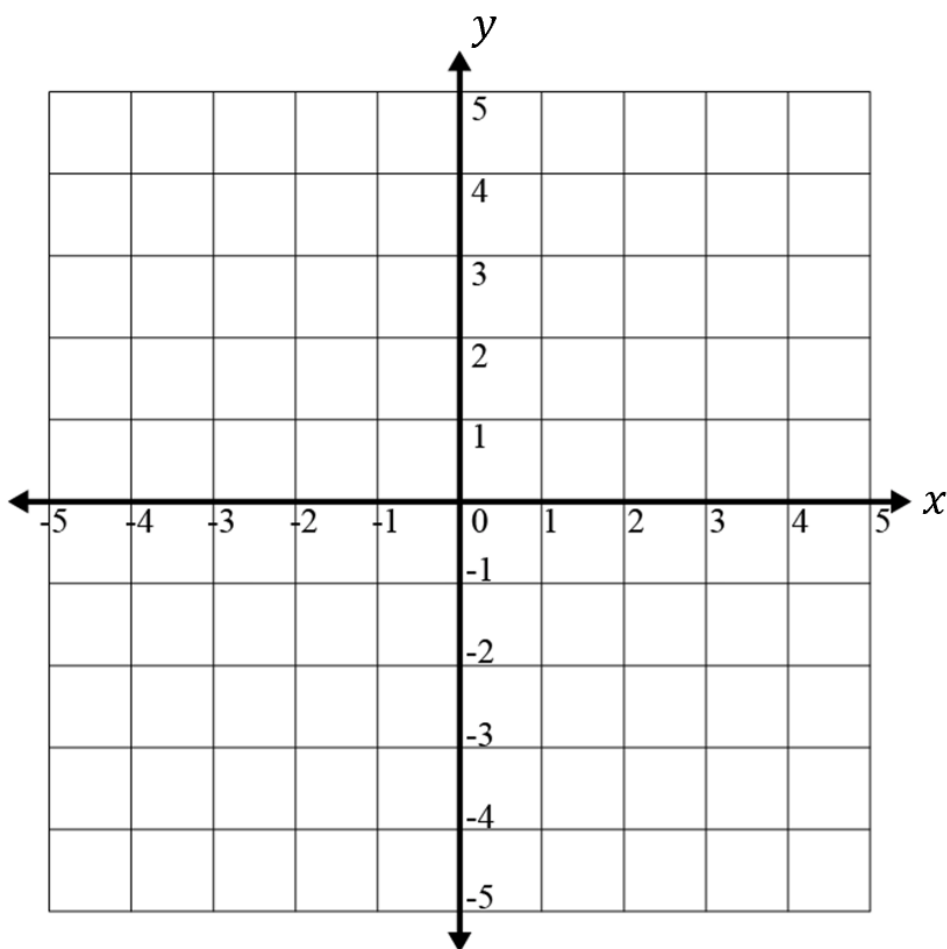
The function $y = f(x)$ is defined as follows:

$$f(x) = \begin{cases} -1 & \text{when } x \leq -2 \\ 2x & \text{when } -2 < x < 0 \\ 3 - x & \text{when } x \geq 0 \end{cases}$$

- (a) Draw a sketch of the graph of $y = f(x)$.

2

Ensure your graph is large enough to clearly label the intercepts and any other relevant values.



- (b) Evaluate $f(-3) + f\left(\frac{1}{2}\right) + 2f(4)$.

1

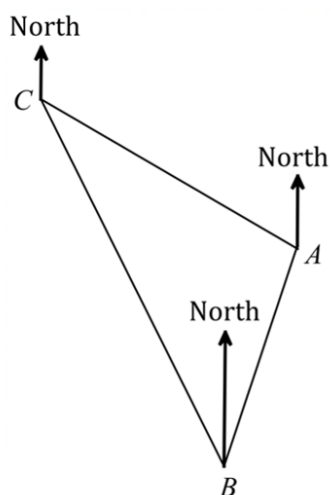
Question 20 (2 marks)**Marks**Differentiate $f(x) = 2x^2 - 3x$ by first principles using**2**

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

Question 21 (2 marks)Given $\log_a 3 = x$ and $\log_a 5 = y$, find an expression for $\log_a \frac{25}{3}$ in terms of x and y .**2**

Question 22 (4 marks)

Marks



NOT TO SCALE

Lucy walks 4.2km from her house at A on a true bearing of 185°T to the park at B . She then walks on a true bearing of 349°T to the shop at C . Lucy knows she must walk 5.2 km from shop C to her house at A .

- (a) Show that $\angle ABC = 16^\circ$

1

- (b) Hence or otherwise find the bearing of A from C . Answer correct to the nearest degree.

3

[illegible]

Question 23 (4 marks)**Marks**

A tangent is drawn to the curve $y = x^5 - 3x^2 - 60x$, at the point where $x = -2$.

- (a) Find the gradient of the tangent

2

- (b) Find the equation of the normal to the curve through the same point.

2

See over for Question 24

Question 24 (5 marks)**Marks**

The number of fish, N , in a hatchery at time t months, is given by the formula:

$$N = N_0 e^{0.322t} \text{ where } N_0 \text{ is a constant.}$$

Initially there were 1000 fish in the hatchery.

- (a) Find the number of fish in the hatchery at the end of 8 months.
Answer correct to the nearest hundred.

1

- (b) At the end of which month will the fish population exceed 50 000?

2

Question 24 continues over the page

- (c) Find the rate of increase in the number of fish at the end of six months.
Answer correct to the nearest hundred fish per month.

2

End of Paper

- ☐ **Write your full name on every page of your solutions.**
- ☐ **Ensure your questions are in numbered order.**
- ☐ **Scan every page of your solutions.**
- ☐ **Check that your pdf file includes ALL of your pages.**
- ☐ **Upload as one pdf file to Canvas before the submission box closes.**

Student No.

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Section I

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Attempt questions 1 - 10

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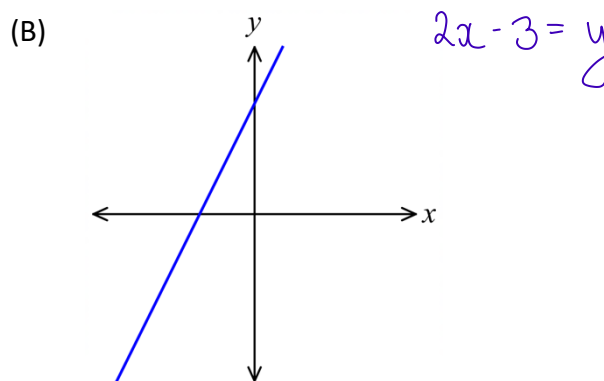
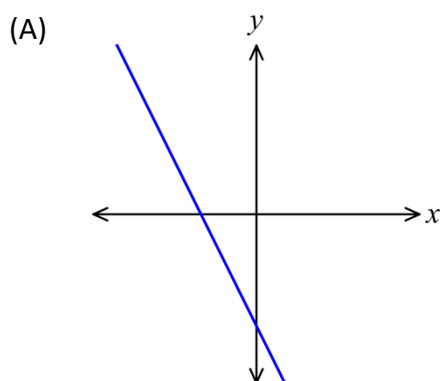
Clearly indicate your multiple-choice answers in your solutions.

1. Which of the following is true for the function $f(x) = \frac{3}{x^2} - 2$?

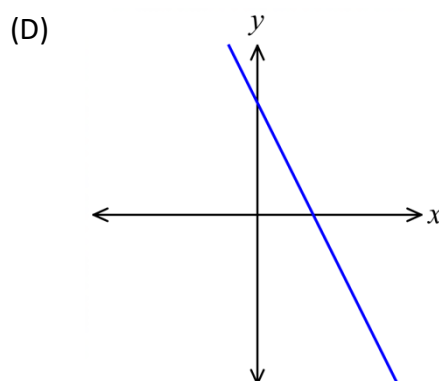
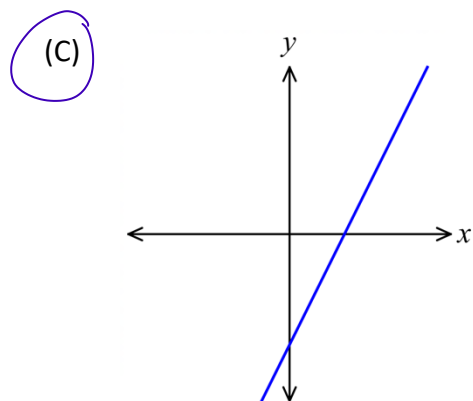
- (A) Even function
(B) Odd function
(C) Zero function
(D) Neither an even, odd or zero function

$$\begin{aligned} f(-x) &= \frac{3}{(-x)^2} - 2 \\ &= \frac{3}{x^2} - 2 \\ &= f(x) \end{aligned}$$

2. Which one of the following graphs could represent the line with equation $2x - y = 3$?



$$2x - 3 = y$$



3. Evaluate $\log_7 \frac{1}{49}$.

- (A) -7
- (B) -2
- (C) 2
- (D) 7

$$\begin{aligned}\log_7 7^{-2} \\&= -2 \log_7 7 \\&= -2\end{aligned}$$

4. Solve the equation $\frac{4}{\sqrt{x}} - 9 = 0$

- (A) $x = \frac{16}{81}$
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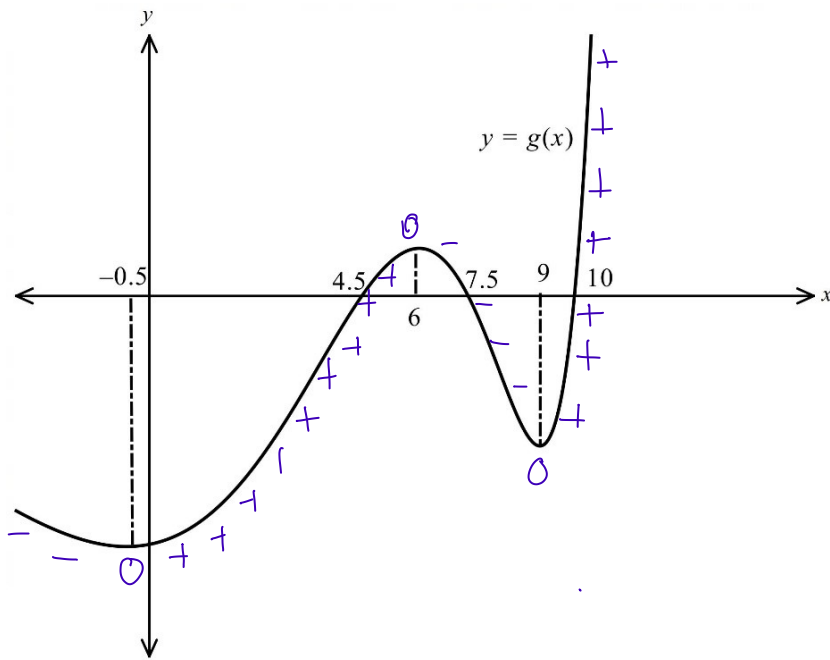
$$\begin{aligned}\frac{4}{\sqrt{x}} &= 9 \\ \sqrt{x} &= \frac{4}{9} \\ x &= \frac{16}{81}\end{aligned}$$

5. What is the exact value of $\sin 135^\circ + \frac{1}{\sin 60^\circ}$?

- (A) $\frac{2\sqrt{2} - \sqrt{3}}{\sqrt{6}}$
- (B) $\frac{2\sqrt{2} - 1}{\sqrt{2}}$
- (C) $\frac{2\sqrt{2} + \sqrt{3}}{\sqrt{6}}$
- (D) $\frac{2\sqrt{2} + 1}{\sqrt{2}}$

$$\begin{aligned}\sin 45^\circ + \frac{1}{\frac{\sqrt{3}}{2}} \\&= \frac{1}{\sqrt{2}} + \frac{2}{\sqrt{3}} \\&= \frac{\sqrt{3} + 2\sqrt{2}}{\sqrt{6}}\end{aligned}$$

6. The graph of $y = g(x)$ is shown below.
For what values of x is $g(x)$ increasing?

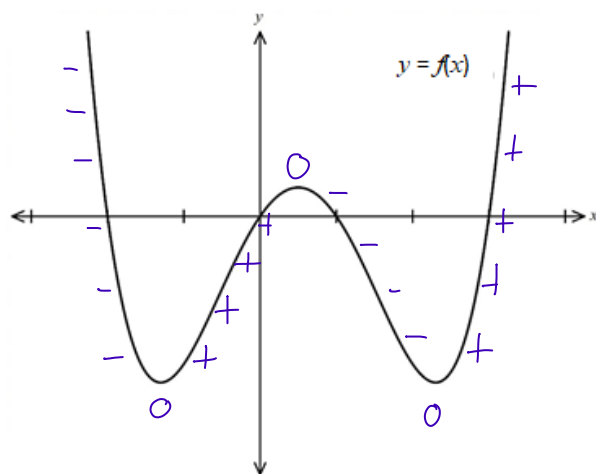


- (A) $(-0.5, 6) \cup (9, \infty)$
- (B) $(-0.5, 4.5) \cup (7.5, \infty)$
- (C) $(4.5, 7) \cup (10, \infty)$
- (D) $(-\infty, -0.5) \cup (6, 9)$
7. Which of the following is the most simplified with a rational denominator equivalent to $\frac{\sqrt{208}}{\sqrt{108}}$?

- (A) $\frac{\sqrt{52}}{\sqrt{27}}$
- (B) $\frac{2\sqrt{39}}{9}$
- (C) $\frac{2\sqrt{13}}{3\sqrt{3}}$
- (D) $\frac{\sqrt{156}}{3}$

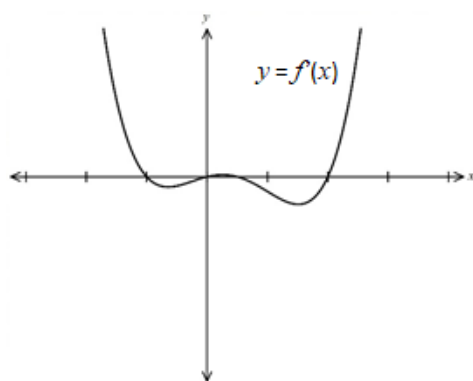
$$\begin{aligned}\sqrt{\frac{208}{108}} &= \sqrt{\frac{52}{27}} \\ &= \frac{2\sqrt{13}}{3\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} \\ &= \frac{2\sqrt{39}}{9}\end{aligned}$$

8. The graph of $y = f(x)$ is shown below.

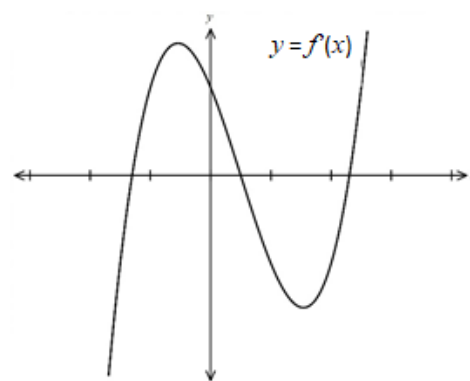


Which graph could represent $y = f'(x)$?

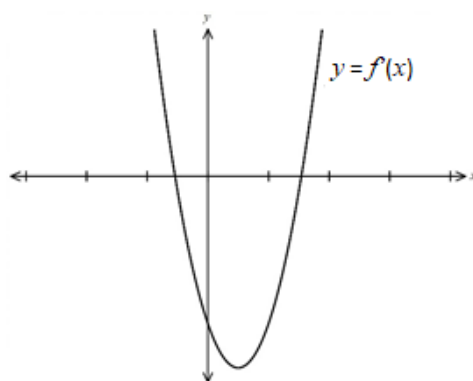
(A)



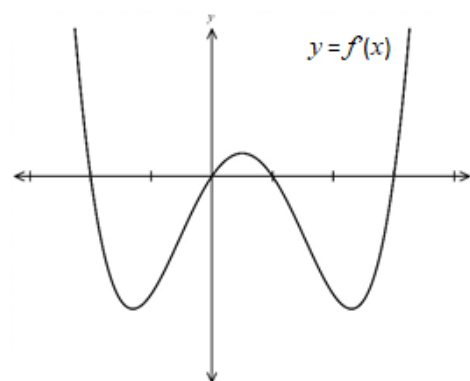
(B)



(C)



(D)



9. It is assumed that the number $N(t)$ of ants in a certain nest at time (t) is given by:

$$N(t) = \frac{A}{1+e^{-t}} \text{ where } A \text{ is a constant and } t \text{ is measured in months.}$$

At time $t = 0$, $N(t)$ is estimated at 2×10^5 ants. What is the value of A ?

- (A) 2×10^{-5}
(B) 2×10^5
(C) 4×10^{-5}
(D) 4×10^5

$$\begin{aligned} \frac{A}{1+e^{-0}} &= 2 \times 10^5 \\ A &= (2 \times 10^5) \times 2 \\ A &= 4 \times 10^5 \end{aligned}$$

10. The function $f(x) = \ln(2x^{-1})$ can be graphed by applying which transformations to the graph of $g(x) = \ln x$?

- (A) A reflection in the y-axis, then a vertical translation of $\ln 2$
(B) A reflection in the x-axis, then a vertical translation of $\ln 2$
(C) A reflection in the x-axis, then a horizontal translation of $\ln 2$
(D) A reflection in the y-axis, then a horizontal translation of $\ln 2$

End of Section 1

$$\begin{aligned} \ln 2x^{-1} &= \ln 2 + \ln x^{-1} \\ &= \ln 2 - \ln x \\ &= -\ln x + \ln 2 \end{aligned}$$

Reflection in the x-axis Translation up $\ln 2$ units.

Section II

40 marks

Attempt all questions

Allow about 1 hour and 15 minutes for this section

- Instructions**
- Answer the questions on blank paper or in the spaces provided. These spaces provide guidance for the expected length of response.
 - Your responses should include relevant mathematical reasoning and/or calculations.
 - Ensure your questions are clearly labelled and submitted in the correct order.
-

Question 11 (2 marks)

Marks

Given that $f(x) = 2x^2 - x$ and $g(x) = 2x - 3$, write an expression for $f(g(x))$ given in the form $ax^2 + bx + c$, where a , b and c are integers.

2

$$\begin{aligned} f(2x-3) &= 2(2x-3)^2 - (2x-3) \\ &= (2x-3)[2(2x-3) - 1] \\ &= (2x-3)(4x-7) \end{aligned}$$

$$\begin{aligned} \text{OR } f(2x-3) &= 2(4x^2 - 12x + 9) - 2x + 3 \\ &= 8x^2 - 24x + 18 - 2x + 3 \\ &= 8x^2 - 26x + 21 \end{aligned}$$

Question 12 (2 marks)

Solve the equation

2

$$5\log_{10}x = 3 + 2\log_{10}x$$

$$\log_{10}x^5 - \log_{10}x^2 = 3$$

$$\log_{10}\left(\frac{x^5}{x^2}\right) = 3$$

$$\log_{10}x^3 = 3$$

$$x^3 = 10^3$$

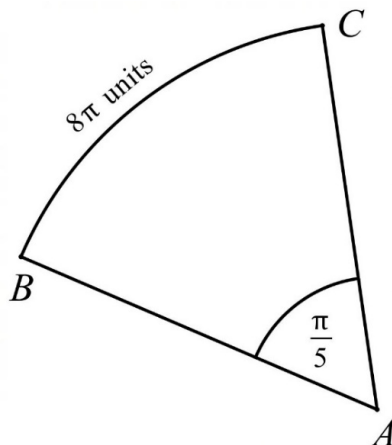
$$\therefore x = 10$$

Question 13 (2 marks)**Marks**

A sector of a circle is shown below. Point A is the centre of the circle and $\angle BAC = \frac{\pi}{5}$ radians.

2

The arc BC has a length of 8π units.



Find the area of the sector. (Give your answer in terms of π)

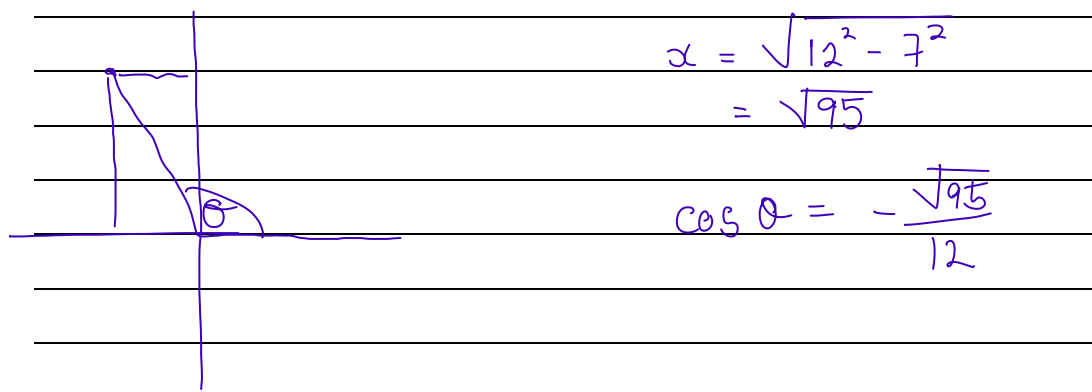
$$\begin{aligned} r \times \frac{\pi}{5} &= 8\pi \\ r &= 8\pi \times \frac{5}{\pi} \\ &= 40 \text{ units.} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} (40)^2 \left(\frac{\pi}{5} \right) \\ &= 160\pi \text{ units}^2 \end{aligned}$$

See over for Question 14

Question 14 (1 mark)**Marks**

Given $\sin \theta = \frac{7}{12}$ for an obtuse angle θ , find the exact value of $\cos \theta$.

1**Question 15** (2 marks)

Solve $|2x - 3| = 15$

2

$$2x - 3 = 15 \quad \text{or} \quad -(2x - 3) = 15$$
$$2x = 18 \quad -2x + 3 = 15$$
$$x = 9 \quad -2x = 12$$
$$x = -6$$

See over for Question 16

Question 16 (3 marks)**Marks**

Use algebra to solve the following simultaneous equations:

3

$$y = x - 2 \quad (1)$$

$$y^2 + x^2 = 10 \quad (2)$$

Subst (1) in (2)

$$(x-2)^2 + x^2 = 10$$

$$x^2 - 4x + 4 + x^2 = 10$$

$$2x^2 - 4x - 6 = 0$$

$$2(x^2 - 2x - 3) = 0$$

$$2(x-3)(x+1) = 0$$

$$x = 3 \quad \text{or} \quad x = -1$$

(3)

Subst (3) in (1)

$$y = 3 - 2$$

$$y = 1$$

$$(3, 1)$$

or

$$y = -1 - 2$$

$$y = -3$$

$$(-1, -3)$$

See over for Question 17

Question 17 (4 marks)**Marks**

Let $3x^2 + 12x - 24 = 3(x + a)^2 + b$ where a and b are constants.

- (a) Find the value of a and b .

2

$$\begin{aligned} & 3(x^2 + 4x - 8) \\ &= 3[(x^2 + 4x + 4) - 8 - 4] \\ &= 3[(x+2)^2 - 12] \\ &= 3(x+2)^2 - 36 \\ \therefore a &= 2 \quad \text{and} \quad b = -36 \end{aligned}$$

- (b) Hence, determine the **vertex** and the **x – intercepts** for the function $f(x) = 3x^2 + 12x - 24$. Express your answer for the x – intercepts in the form $c \pm d\sqrt{3}$ where c and d are integers.

2

$$\begin{aligned} & \text{Vertex } (-2, -36) \\ & x\text{-int: } 3x^2 + 12x - 24 = 0 \\ & 3(x+2)^2 - 36 = 0 \\ & 3(x+2)^2 = 36 \\ & (x+2)^2 = 12 \\ & x+2 = \pm\sqrt{12} \\ & x = -2 \pm \sqrt{12} \\ & = -2 \pm 2\sqrt{3} \end{aligned}$$

See over for Question 18

Question 18 (4 marks)**Marks**Differentiate, with respect to x .

(a) $(5x^2 - 3)^4$

$$\frac{d}{dx} (5x^2 - 3)^4$$

2

$$= 4(5x^2 - 3)^3 \times 10x$$
$$= 40x(5x^2 - 3)^3$$

(b) $\frac{3x^2 - 4}{x + 5}$

2

Let $u = 3x^2 - 4$ and $v = x + 5$

$$u' = 6x$$

$$v' = 1$$

$$\frac{d}{dx} \left(\frac{3x^2 - 4}{x + 5} \right) = \frac{6x(x + 5) - 1(3x^2 - 4)}{(x + 5)^2}$$
$$= \frac{6x^2 + 30x - 3x^2 + 4}{(x + 5)^2}$$
$$= \frac{3x^2 + 30x + 4}{(x + 5)^2}$$

See over for Question 19

Question 19 (3 marks)**Marks**

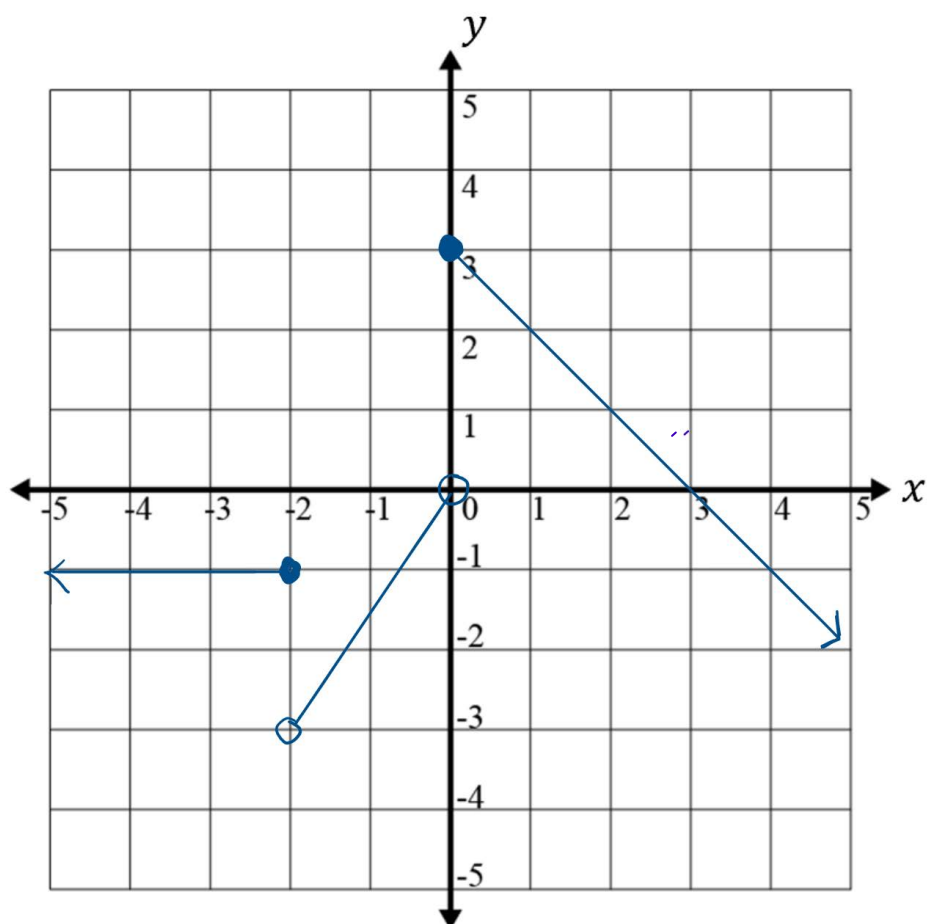
The function $y = f(x)$ is defined as follows:

$$f(x) = \begin{cases} -1 & \text{when } x \leq -2 \\ 2x & \text{when } -2 < x < 0 \\ 3 - x & \text{when } x \geq 0 \end{cases}$$

- (a) Draw a sketch of the graph of $y = f(x)$.

2

Ensure your graph is large enough to clearly label the intercepts and any other relevant values.



- (b) Evaluate $f(-3) + f\left(\frac{1}{2}\right) + 2f(4)$.

1

$$= -1 + 2.5 + 2(-1)$$

$$= 1.5 - 2$$

$$= -0.5$$

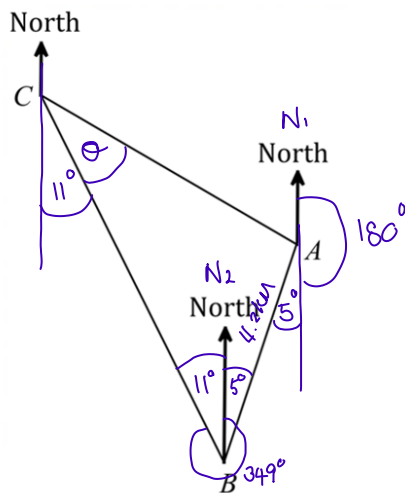
Question 20 (2 marks)**Marks**Differentiate $f(x) = 2x^2 - 3x$ by first principles using**2**

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

$$\begin{aligned} f'(x) &= \lim_{h \rightarrow 0} \frac{2(x+h)^2 - 3(x+h) - (2x^2 - 3x)}{h} \\ &= \lim_{h \rightarrow 0} \frac{\cancel{2x^2} + 4xh + 2h^2 - \cancel{3x} - 3h - \cancel{2x^2} + \cancel{3x}}{h} \\ &= \lim_{h \rightarrow 0} \frac{4xh + 2h^2 - 3h}{h} \\ &= \lim_{h \rightarrow 0} \frac{\cancel{h}(4x + 2h - 3)}{\cancel{h}} \\ &= \lim_{h \rightarrow 0} 4x + 2h - 3 \\ &= 4x - 3 \end{aligned}$$

Question 21 (2 marks)**2**Given $\log_a 3 = x$ and $\log_a 5 = y$, find an expression for $\log_a \frac{25}{3}$ in terms of x and y .

$$\begin{aligned} \log_a \frac{25}{3} &= \log_a 25 - \log_a 3 \\ &= \log_a 5^2 - x \\ &= 2 \log_a 5 - x \\ &= 2y - x \end{aligned}$$



Lucy walks 4.2km from her house at A on a true bearing of 185° to the park at B . She then walks on a true bearing of 349° to the shop at C . Lucy knows she must walk 5.2 km from shop C to her house at A .

- (a) Show that $\angle ABC = 16^\circ$

1

$$\angle N_1BA = 185^\circ - 180^\circ$$

$$= 5^\circ$$

$$\angle N_2BC = 360^\circ - 349^\circ$$

$$= 11^\circ$$

$$\therefore \angle ABC = 11^\circ + 5^\circ$$

$$= 16^\circ$$

- (b) Hence or otherwise find the bearing of A from C . Answer correct to the nearest degree.

3

$$\frac{\sin \theta}{4.2} = \frac{\sin 16^\circ}{5.2}$$

$$\sin \theta = \frac{4.2 \sin 16^\circ}{5.2}$$

$$\theta = \sin^{-1} \left(\frac{4.2 \sin 16^\circ}{5.2} \right)$$

$$= 12.86...$$

$$\text{Bearing from } C \text{ to } A = 180 - (11 + 12.86...)$$

$$\approx 156^\circ \text{T}$$

Question 23 (4 marks)**Marks**

A tangent is drawn to the curve $y = x^5 - 3x^2 - 60x$, at the point where $x = -2$.

- (a) Find the gradient of the tangent

2

$$\begin{aligned}\frac{dy}{dx} &= 5x^4 - 6x - 60 \\ \text{When } x = -2 \quad \frac{dy}{dx} &= 5(-2)^4 - 6(-2) - 60 \\ &= 80 + 12 - 60 \\ &= 32 \\ \therefore m &= 32\end{aligned}$$

- (b) Find the equation of the normal to the curve through the same point.

2

$$\begin{aligned}m_{\perp} &= -\frac{1}{32} \quad \text{When } x = -2 \\ y &= (-2)^5 - 3(-2)^2 - 60(-2) \\ &= 76 \\ &(-2, 76) \\ y - 76 &= -\frac{1}{32}(x + 2) \\ 32y - 2432 &= -x - 2 \\ x + 32y - 2430 &= 0\end{aligned}$$

See over for Question 24

Question 24 (5 marks)**Marks**

The number of fish, N , in a hatchery at time t months, is given by the formula:

$$N = N_0 e^{0.322t} \text{ where } N_0 \text{ is a constant.}$$

Initially there were 1000 fish in the hatchery.

- (a) Find the number of fish in the hatchery at the end of 8 months.
Answer correct to the nearest hundred.

1

$$\text{When } t = 0 \quad N = 1000$$

$$\therefore N_0 e^0 = 1000$$

$$\therefore N_0 = 1000$$

$$\text{At } t = 8 \quad N = 1000 e^{0.322(8)}$$

$$\approx 13100 \text{ fish}$$

- (b) At the end of which month will the fish population exceed 50 000?

2

$$1000 e^{0.322t} = 50\,000$$

$$e^{0.322t} = 50$$

$$0.322t = \ln 50$$

$$t = \frac{\ln 50}{0.322}$$

$$t = 12.149 \dots \text{ months}$$

$$\therefore \text{At the end of month } 13$$

Question 24 continues over the page

- (c) Find the rate of increase in the number of fish at the end of six months.
Answer correct to the nearest hundred fish per month.

2

$$\begin{aligned}
 N &= 1000 e^{0.322t} \\
 \frac{dN}{dt} &= 0.322 \times 1000 e^{0.322t} \\
 &= 322 e^{0.322t} \\
 \text{At } t = 6 \quad \frac{dN}{dt} &= 322 e^{0.322(6)} \\
 &= 2200 \text{ fish/month}
 \end{aligned}$$

End of Paper

- ☐ Write your full name on every page of your solutions.
- ☐ Ensure your questions are in numbered order.
- ☐ Scan every page of your solutions.
- ☐ Check that your pdf file includes ALL of your pages.
- ☐ Upload as one pdf file to Canvas before the submission box closes.