

GCSE MATHEMATICS (9-1) — EXAM PRACTICE WORKBOOK

Grade 8 Mathematics — Practice Questions

(Higher Tier)

Higher Tier Exam Practice, Calculator Tags, 2 Mixed Review Papers & Full Answer Key

- 6 Edexcel Higher Exam-Style Questions per topic with mark allocations
- Calculator & Non-Calculator Badges on every single question
- 2 Interleaved Mixed Review Sets (Paper 1 & Paper 2/3 method selection)
- Structured Working Spaces & Topic-Linked Answer Key Appendix

Student Name: _____

Class / Teacher: _____

Target Grade: _____



SCAN FOR ONLINE PRACTICE & WORKED SOLUTIONS

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Click any topic to jump straight there. Complete both Mixed Review Sets before checking the Answer Key Appendix.

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RATIO, PROPORTION AND RATES OF CHANGE

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MIXED EXAM REVIEW (PICK THE RIGHT METHOD)

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Completing the Square

EDEXCEL GCSE EXAM PRACTICE

Total: 17 marks

Completing the Square — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 ☒ Non-Calculator

(2 marks)

Write $x^2 + 8x + 23$ in the form $(x + a)^2 + b$

WORKING OUT SPACE

Answer:

Question 2 ☒ Non-Calculator

(3 marks)

Write $3x^2 + 30x + 79$ in the form $a(x + b)^2 + c$

WORKING OUT SPACE

Answer:

Question 3 ☒ Non-Calculator

(3 marks)

By completing the square, solve $x^2 - 16x + 38 = 0$.
Give your answers in surd form.

WORKING OUT SPACE

Answer:

Question 4 **Calculator****(3 marks)**

By completing the square, solve $5x^2 + 40x - 40 = 0$.
Give your answers to 2 decimal places.

WORKING OUT SPACE

Answer:**Question 5** **Non-Calculator****(3 marks)**

By completing the square, find the coordinates of the minimum point of the curve $y = 2x^2 - 12x + 11$.

WORKING OUT SPACE

Answer:**Question 6** **Non-Calculator****(3 marks)**

By completing the square, find the coordinates of the maximum point of the curve $y = 13 + 6x - x^2$.

WORKING OUT SPACE

Answer:

Quadratic Simultaneous Equations

EDEXCEL GCSE EXAM PRACTICE

Total: 24 marks

Quadratic Simultaneous Equations — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 ☒ Non-Calculator

(4 marks)

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 26$$

$$x + y = -6$$

WORKING OUT SPACE

Answer:

Question 2 ☒ Non-Calculator

(4 marks)

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 25$$

$$y = x + 1$$

WORKING OUT SPACE

Answer:

Question 3 ☒ Non-Calculator

(4 marks)

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 17$$

$$x + 4y = 0$$

WORKING OUT SPACE

Answer:

Question 4 **Non-Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$3x^2 + 2y^2 = 35$$

$$3x + y = 7$$

WORKING OUT SPACE

Answer:

Question 5 **Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$3x^2 - y^2 = 11$$

$$3x - 5y = -11$$

WORKING OUT SPACE

Answer:

Question 6 **Non-Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$2x^2 - 3y^2 = 2$$

$$2x - 3y = 2$$

WORKING OUT SPACE

Answer:

Quadratic Inequalities

EDEXCEL GCSE EXAM PRACTICE

Total: 13 marks

Quadratic Inequalities — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 ☒ Non-Calculator

(2 marks)

Solve $x^2 - 36 > 0$

WORKING OUT SPACE

Answer:

Question 2 ☒ Non-Calculator

(2 marks)

Solve $x^2 \leq 25$

WORKING OUT SPACE

Answer:

Question 3 ☒ Non-Calculator

(2 marks)

Solve $x^2 + x - 30 \geq 0$

WORKING OUT SPACE

Answer:

Question 4 **Non-Calculator****(2 marks)**Solve $x^2 - x \leq 20$

WORKING OUT SPACE

Answer:**Question 5** **Non-Calculator****(2 marks)**Solve $3x^2 - 10x - 8 < 0$

WORKING OUT SPACE

Answer:**Question 6** **Calculator****(3 marks)**

Work out the integer values that satisfy:

 $2x^2 + 7x - 13 < 0$

WORKING OUT SPACE

Answer:

Iteration

EDEXCEL GCSE EXAM PRACTICE

Total: 15 marks

Iteration — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 **Calculator**

(3 marks)

The volume of water, in litres, in a solar storage tank t days from now is y_t where:

$$y_0 = 4000$$

$$y_{t+1} = 0.95(y_t + 120)$$

Work out the volume of water in the tank 3 days from now. Give your answer to the nearest whole number.

WORKING OUT SPACE

Answer:

Question 2 **Calculator**

(3 marks)

Using $x_{n+1} = 3 + \frac{7}{x_n^2}$ with $x_0 = 4$.

Find the value of x_3 .

Give your answer to 3 decimal places.

WORKING OUT SPACE

Answer:

Question 3 **Calculator****(3 marks)**

Using $x_{n+1} = \sqrt{5x_n + 3}$ with $x_0 = 4$.

Find the value of x_3 .

Give your answer to 3 decimal places.

WORKING OUT SPACE

Answer:

Question 4 **Non-Calculator****(2 marks)**

Show that the equation $x^3 + 7x - 5 = 0$ has a solution between $x = 0$ and $x = 1$.

WORKING & PROOF SPACE

Question 5 **Non-Calculator****(2 marks)**

Show that the equation $3x^3 - x^2 - 5 = 0$ can be rearranged to give $x = \sqrt{\frac{5}{3x-1}}$.

WORKING & PROOF SPACE

Question 6 **Non-Calculator****(2 marks)**

The iteration formula $x_{n+1} = \frac{2}{x_n^2} + 2$ is used to solve an equation of the form $x^3 + cx^2 + d = 0$.

Find the values of c and d .

WORKING OUT SPACE

 $c =$ $d =$

Transforming Graphs

EDEXCEL GCSE EXAM PRACTICE

Total: 13 marks

Transforming Graphs — Practice Questions

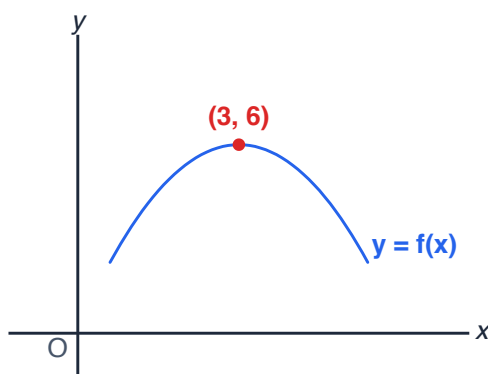
Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 ☒ Non-Calculator

(2 marks)

Shown below is the curve with equation $y = f(x)$.

The coordinates of the maximum point of the curve are $(3, 6)$.



Write down the coordinates of the turning point of the curve with equation $y = f(x + 4)$.

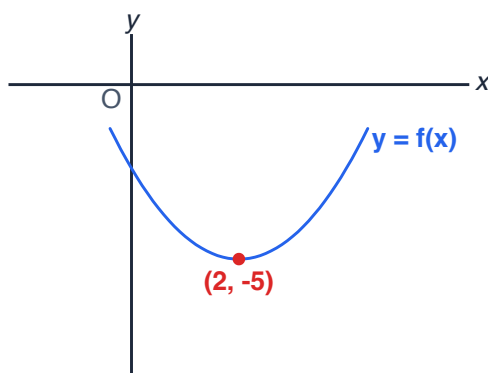
WORKING OUT SPACE

Answer:

Question 2 **Non-Calculator****(2 marks)**

Shown below is the curve with equation $y = f(x)$.

The coordinates of the minimum point of the curve are $(2, -5)$.



Write down the coordinates of the turning point of the curve with equation $y = f(x) + 3$.

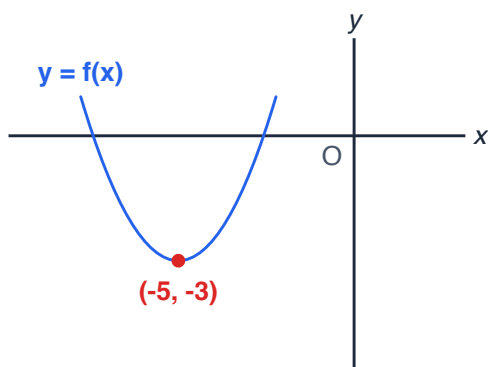
WORKING OUT SPACE

Answer:

Question 3 **Non-Calculator****(2 marks)**

Shown below is the curve with equation $y = f(x)$.

The coordinates of the minimum point of the curve are $(-5, -3)$.



Write down the coordinates of the turning point of the curve with equation $y = -f(x + 2)$.

WORKING OUT SPACE

Answer:

Question 4 ✎ Non-Calculator**(2 marks)**

The curve $y = \cos x^\circ$ for $0 \leq x \leq 360$ has a minimum point at $(180, -1)$.

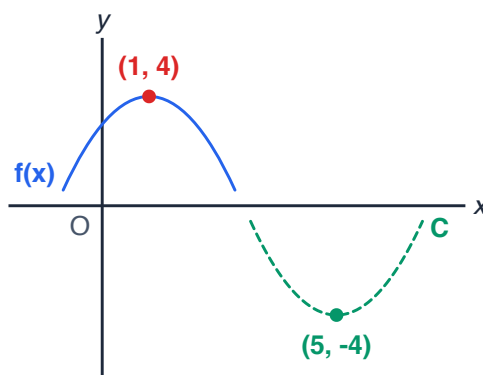
Write down the coordinates of the minimum point of the curve with equation $y = \cos(x - 45)^\circ + 2$.

WORKING OUT SPACE

Answer:

Question 5 ✎ Non-Calculator**(2 marks)**

The diagram shows the curve $y = f(x)$, which has a maximum point at $(1, 4)$, and a transformed curve C , which has a minimum point at $(5, -4)$.



Curve C has equation $y = -f(x + a)$, where a is a constant.
Find the value of a .

WORKING OUT SPACE

 $a =$

Question 6 **Non-Calculator****(3 marks)**

Curve C has equation $y = x^2 - 6x + 11$.

Curve C is translated by the vector $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$ to give curve D .

Find the equation of curve D in the form $y = x^2 + bx + c$.

WORKING OUT SPACE

Answer:

Kinematics

EDEXCEL GCSE EXAM PRACTICE

Total: 18 marks

Kinematics — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1 Non-Calculator

(2 marks)

A particle starts from rest and moves in a straight line with a constant acceleration of 3.5 m/s^2 .

Work out the distance travelled by the particle in the first 6 seconds, in metres.

WORKING OUT SPACE

Answer:

Question 2 Non-Calculator

(3 marks)

A car is travelling along a straight road at 12 m/s .

It accelerates uniformly at 2 m/s^2 over a distance of 64 m .

Calculate the final speed of the car in m/s .

WORKING OUT SPACE

Answer:

Question 3 Calculator

(3 marks)

A high-speed train travelling at 45 m/s applies its brakes and decelerates uniformly at 1.8 m/s^2 until it comes to rest.

Calculate the distance the train travels while braking, in metres.

WORKING OUT SPACE

Answer:

Question 4 **Calculator****(3 marks)**

A motorist drives 90 km along a motorway at an average speed of 75 km/h, and then drives 42 km along country roads at an average speed of 35 km/h.

Work out the motorist's average speed for the whole 132 km journey in km/h.

WORKING OUT SPACE

Answer:**Question 5** **Non-Calculator****(3 marks)**

A particle passes a point O with velocity 4 m/s and moves in a straight line with constant acceleration 2 m/s^2 .

At time t seconds after passing O , the displacement of the particle from O is 45 m.

Form and solve a quadratic equation to find the value of t .

WORKING OUT SPACE

Answer:**Question 6** **Non-Calculator****(4 marks)**

A runner completes a 14 km training run in two stages.

She runs the first 8 km at a constant speed of x km/h, and the remaining 6 km at a constant speed of $(x - 2)$ km/h.

Her total time for the 14 km run is 2 hours.

Form and solve a quadratic equation to find her speed x , in km/h, during the first stage.

WORKING OUT SPACE

Answer:

Velocity-Time Graphs

EDEXCEL GCSE EXAM PRACTICE

Total: 14 marks

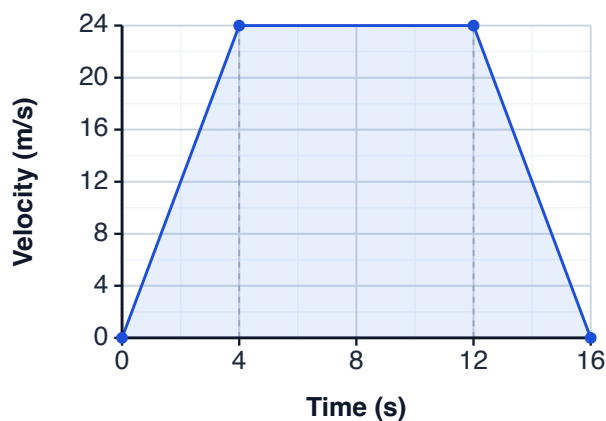
Velocity-Time Graphs — Practice Questions

Check the Calculator or Non-Calculator label on each question before you start. Show your working clearly in the box.

Question 1

 Calculator

(2 marks)

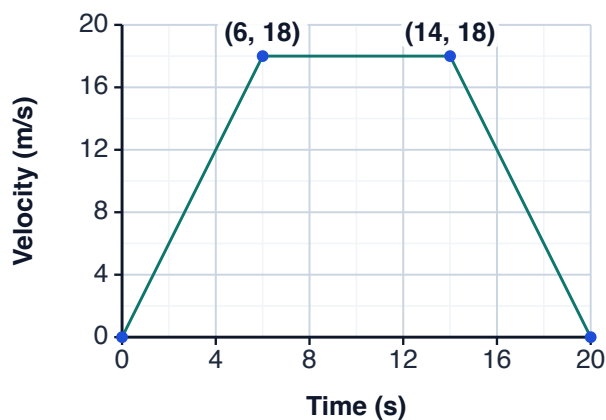


The velocity-time graph shows the 16-second journey of a motorbike.

Calculate the **total distance** travelled by the motorbike in metres.

WORKING OUT SPACE

Answer:

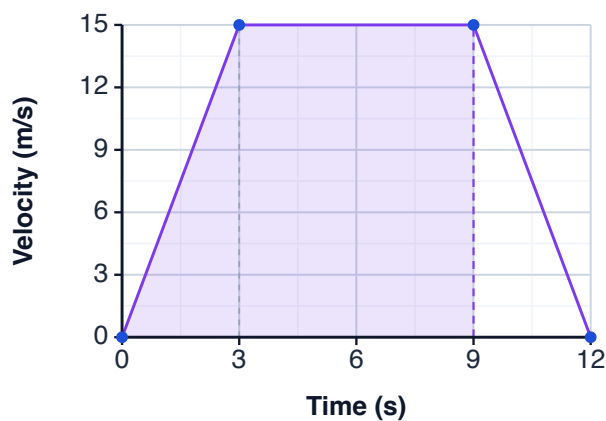
Question 2 **Non-Calculator****(2 marks)**

The velocity-time graph shows the motion of a tram.

Work out the **acceleration** of the tram during the first **6 seconds** in m/s^2 .

WORKING OUT SPACE

Answer:

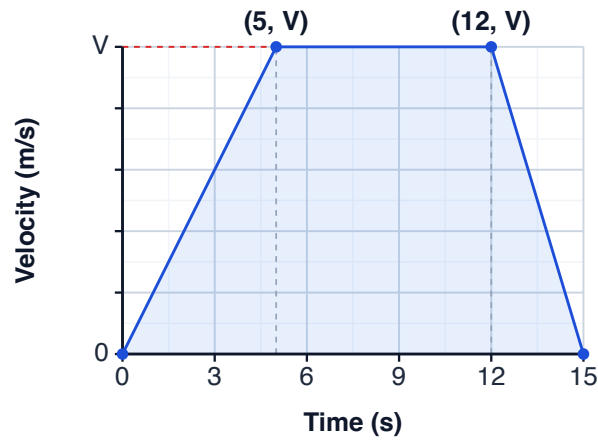
Question 3 **Calculator****(2 marks)**

The velocity-time graph shows the motion of a go-kart.

Calculate the distance travelled by the go-kart in the **first 9 seconds** (the shaded region) in metres.

WORKING OUT SPACE

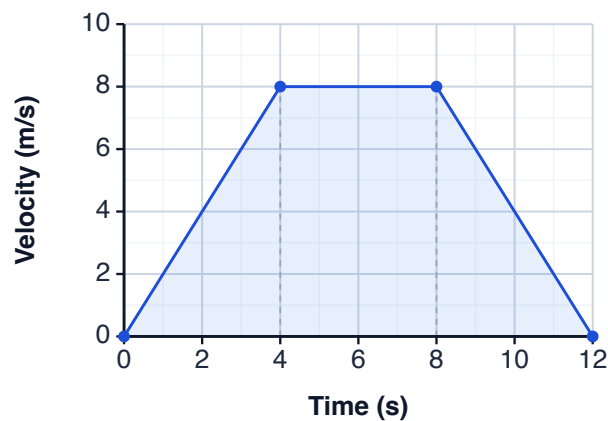
Answer:

Question 4 Non-Calculator**(2 marks)**

The velocity-time graph shows the journey of a sports car that reaches a maximum velocity of V m/s.

The total distance travelled during the 15 seconds is 330 m. Work out the value of V .

WORKING OUT SPACE

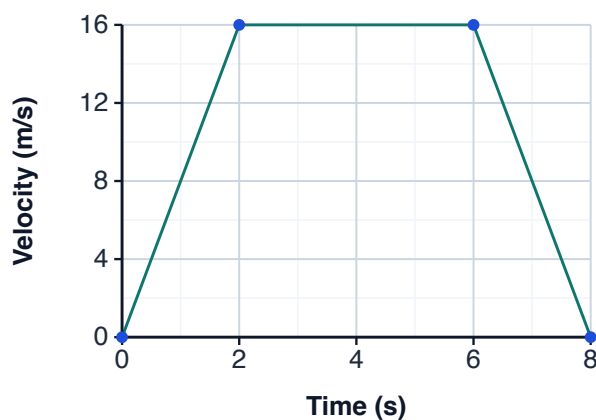
 $V = \dots\dots\dots$ **Question 5** Non-Calculator**(2 marks)**

The velocity-time graph shows the 12-second journey of a runner.

Work out the magnitude of the **deceleration** of the runner during the final 4 seconds (between $t = 8$ s and $t = 12$ s) in m/s^2 .

WORKING OUT SPACE

Answer: $\dots\dots\dots$

Question 6 **Non-Calculator****(4 marks)**

The velocity-time graph shows the 8-second journey of a speedboat.

- (a) Work out the **average speed** of the speedboat over the whole 8-second journey in m/s.
(b) Calculate the speed of the speedboat at $t = 7$ seconds in m/s.

WORKING OUT SPACE

(a) m/s (b) m/s

EDEXCEL GCSE HIGHER PAPER 1 — NON-CALCULATOR (GRADE 8)

Mixed Review 1 of 2

Mixed Review 1 — Choosing the Right Method (Non-Calculator)

Total: 39 marks

These 15 unseen Grade 8 questions are mixed across topics with no topic headings — just like a real Edexcel Paper 1 exam. Identify the underlying method first, set out full algebraic or geometric working, and give exact simplified answers.

Question 1 ✎ Non-Calculator

(3 marks)

Write $2x^2 - 12x + 21$ in the form $a(x + b)^2 + c$

WORKING OUT SPACE

Answer:

Question 2 ✎ Non-Calculator

(3 marks)

A lorry travelling at 20 m/s brakes uniformly and comes to rest in a distance of 80 m .

Calculate the magnitude of the deceleration of the lorry in m/s^2 .

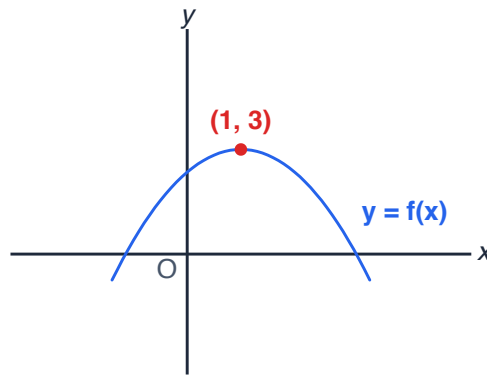
WORKING OUT SPACE

Answer:

Question 3 **Non-Calculator****(2 marks)**

Shown below is the curve with equation $y = f(x)$.

The coordinates of the maximum point of the curve are $(1, 3)$.



Write down the coordinates of the turning point of the curve with equation $y = f(x - 2) + 4$.

WORKING OUT SPACE

Answer:

Question 4 **Non-Calculator****(2 marks)**

Solve $2x^2 - 11x + 12 \leq 0$

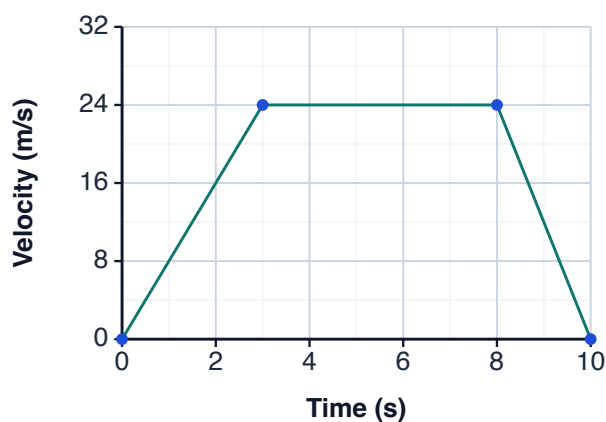
WORKING OUT SPACE

Answer:

Question 5 **Non-Calculator****(2 marks)**

Show that the equation $x^3 + 4x - 9 = 0$ has a solution between $x = 1$ and $x = 2$.

WORKING & PROOF SPACE

Question 6 **Non-Calculator****(2 marks)**

The velocity-time graph shows the motion of a sprinter.

Work out the **acceleration** of the sprinter during the first **3 seconds** in m/s^2 .

WORKING OUT SPACE

Answer:

Question 7 **Non-Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 13$$

$$2x + 3y = 0$$

WORKING OUT SPACE

Answer:

Question 8 **Non-Calculator****(3 marks)**

By completing the square, solve $3x^2 + 6x - 30 = 0$.

Give your answers in surd form.

WORKING OUT SPACE

Answer:

Question 9 **Non-Calculator****(3 marks)**

A hiker walks 12 km uphill at an average speed of 3 km/h and immediately walks back down the same 12 km trail at an average speed of 6 km/h.

Work out the hiker's average speed for the entire 24 km round trip in km/h.

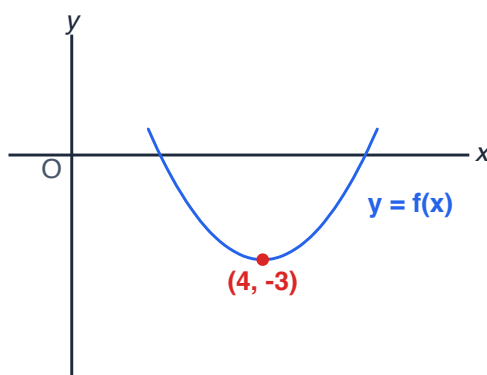
WORKING OUT SPACE

Answer:

Question 10 **Non-Calculator****(2 marks)**

Shown below is the curve with equation $y = f(x)$.

The coordinates of the minimum point of the curve are $(4, -3)$.



Write down the coordinates of the turning point of the curve with equation $y = -f(x - 2)$.

WORKING OUT SPACE

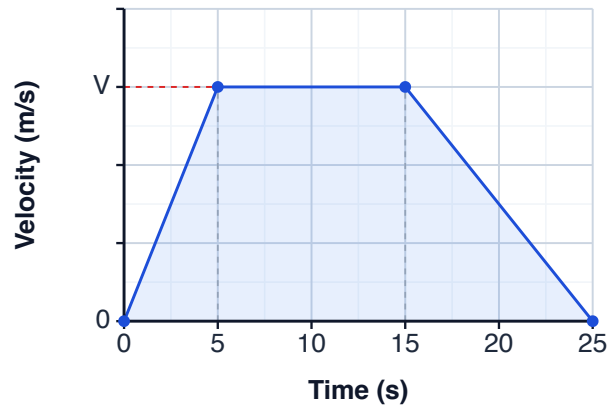
Answer:

Question 11 **Non-Calculator****(2 marks)**

Solve $2x^2 - 11x + 12 > 0$

WORKING OUT SPACE

Answer:

Question 12 ✎ Non-Calculator**(2 marks)**

The velocity-time graph shows the journey of an underground train that reaches a maximum velocity of V m/s.

The total distance travelled during the 25 seconds is 262.5 m. Work out the value of V .

WORKING OUT SPACE

 $V =$ **Question 13** ✎ Non-Calculator**(2 marks)**

The iteration formula $x_{n+1} = \frac{5}{x_n^2} + 3$ is used to solve an equation of the form $x^3 + cx^2 + d = 0$.

Find the values of c and d .

WORKING OUT SPACE

 $c =$ $d =$ **Question 14** ✎ Non-Calculator**(3 marks)**

By completing the square, find the coordinates of the maximum point of the curve $y = 7 - 6x - x^2$.

WORKING OUT SPACE

Answer:

Question 15 **Non-Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$3x^2 - y^2 = 2$$

$$3x + 2y = 1$$

WORKING OUT SPACE

Answer:

Mixed Review 2 — Choosing the Right Method (Calculator)**Total: 44 marks**

These 15 unseen Grade 8 questions are interleaved across topics to test method selection under Paper 2/3 conditions. Write down every equation, substitution, or area calculation clearly before rounding your final answer.

Question 1 **Calculator****(3 marks)**

The value, in pounds, of an endowment fund t years from now is y_t where:

$$y_0 = 50,000$$

$$y_{t+1} = 1.05(y_t - 500)$$

Work out the value of the fund 3 years from now. Give your answer to the nearest whole number.

WORKING OUT SPACE

Answer:**Question 2** **Calculator****(3 marks)**

By completing the square, solve $x^2 - 6x - 4 = 0$.

Give your answers to 2 decimal places.

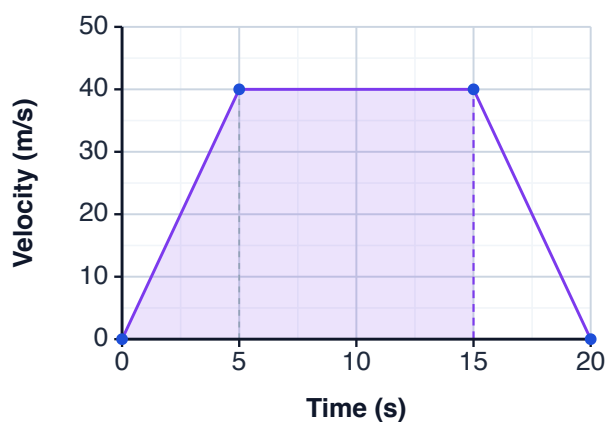
WORKING OUT SPACE

Answer:

Question 3

 Calculator

(2 marks)



The velocity-time graph shows the motion of a train.

Calculate the distance travelled by the train in the **first 15 seconds** (the shaded region) in metres.

WORKING OUT SPACE

Answer:

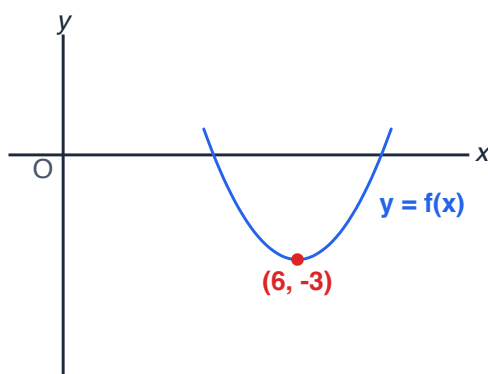
Question 4

 Calculator

(2 marks)

Shown below is the curve with equation $y = f(x)$.

The coordinates of the minimum point of the curve are $(6, -3)$.



Write down the coordinates of the turning point of the curve with equation $y = f(-x)$.

WORKING OUT SPACE

Answer:

Question 5 **Calculator****(3 marks)**

A stone is dropped from rest from the top of a vertical cliff and falls freely under gravity ($a = 9.8 \text{ m/s}^2$). The stone hits the sea 4 seconds later.

Work out the height of the cliff in metres.

WORKING OUT SPACE

Answer:**Question 6** **Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 25$$

$$2x - y = 10$$

WORKING OUT SPACE

Answer:**Question 7** **Calculator****(3 marks)**

Using $x_{n+1} = 2 + \frac{2}{x_n^2}$ with $x_0 = 1$.

Find the value of x_3 .

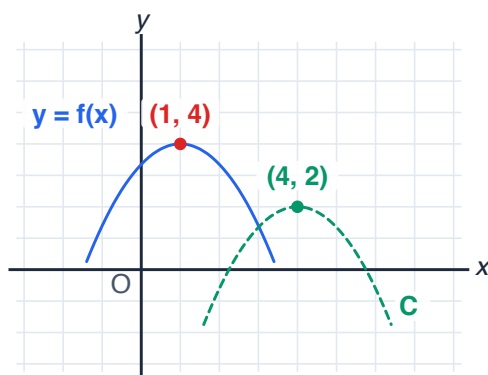
Give your answer to 3 decimal places.

WORKING OUT SPACE

Answer:

Question 8 **Calculator****(2 marks)**

The diagram shows the curve $y = f(x)$ with maximum point $(1, 4)$ and a translated curve C with maximum point $(4, 2)$.



The equation of curve C is $y = f(x - a) + b$.
Find the values of a and b .

WORKING OUT SPACE

 $a = \dots\dots\dots$ $b = \dots\dots\dots$
Question 9 **Calculator****(3 marks)**

Work out the integer values that satisfy:

$$x^2 - x - 11 < 0$$

WORKING OUT SPACE

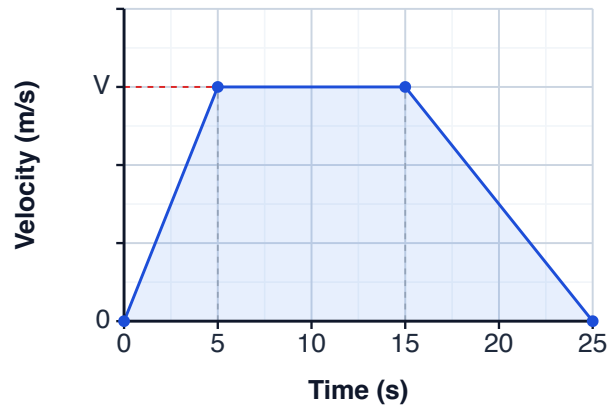
Answer:
Question 10 **Calculator****(3 marks)**

Starting with $x_0 = 0$, use the iteration formula $x_{n+1} = \frac{3}{x_n^2 + 3}$ three times to find an estimate for the solution to $x^3 + 3x = 3$.

Find x_3 to 3 decimal places.

WORKING OUT SPACE

Answer:

Question 11 **Calculator****(2 marks)**

The velocity-time graph shows the journey of an underground train that reaches a maximum velocity of V m/s.

The total distance travelled during the 25 seconds is 525 m. Work out the value of V .

WORKING OUT SPACE

 $V =$ **Question 12** **Calculator****(3 marks)**

By completing the square, solve $4x^2 - 8x - 116 = 0$.
Give your answers to 2 decimal places.

WORKING OUT SPACE

Answer:**Question 13** **Calculator****(4 marks)**

Solve algebraically the simultaneous equations:

$$x^2 + y^2 = 52$$

$$x = -y + 2$$

WORKING OUT SPACE

Answer:

Question 14 **Calculator****(4 marks)**

A cyclist rides 18 km at a constant speed of x km/h and then 15 km at a constant speed of $(x + 3)$ km/h.
The total time for the journey is 2.5 hours.

Form and solve a quadratic equation to find the value of x .

WORKING OUT SPACE

Answer:**Question 15** **Calculator****(3 marks)**

Work out the integer values that satisfy:

$$2x^2 + 10x - 11 < 0$$

WORKING OUT SPACE

Answer:

APPENDIX

Answers & Mark Schemes

Complete Edexcel Higher answers, required factorised algebraic forms, and Mixed Review topic guides.

Topic 1: Completing the Square

Q1 (Non-Calc): $(x + 4)^2 + 7$ [2m]

Q2 (Non-Calc): $3(x + 5)^2 + 4$ [3m]

Q3 (Non-Calc): $8 - \sqrt{26}, 8 + \sqrt{26}$ [3m]

Q4 (Calc): $-8.90, 0.90$ [3m]

Q5 (Non-Calc): $(3, -7)$ [3m]

Q6 (Non-Calc): $(3, 22)$ [3m]

Topic 2: Quadratic Simultaneous Equations

Q1 (Non-Calc): $(-5, -1)$ and $(-1, -5)$ [4m]

Q2 (Non-Calc): $(-4, -3)$ and $(3, 4)$ [4m]

Q3 (Non-Calc): $(-4, 1)$ and $(4, -1)$ [4m]

Q4 (Non-Calc): $(1, 4)$ and $(3, -2)$ [4m]

Q5 (Calc): $(-2, 1)$ and $(3, 4)$ [4m]

Q6 (Non-Calc): $(-5, -4)$ and $(1, 0)$ [4m]

Topic 3: Quadratic Inequalities

Q1 (Non-Calc): $x < -6$ or $x > 6$ [2m]

Q2 (Non-Calc): $-5 \leq x \leq 5$ [2m]

Q3 (Non-Calc): $x \leq -6$ or $x \geq 5$ [2m]

Q4 (Non-Calc): $-4 \leq x \leq 5$ [2m]

Q5 (Non-Calc): $-\frac{2}{3} < x < 4$ [2m]

Q6 (Calc): $-4, -3, -2, -1, 0, 1$ [3m]

Topic 4: Iteration

Q1 (Calc): 3,755 litres [3m]

Q2 (Calc): 3.542 [3m]

Q3 (Calc): 5.382 [3m]

Q4 (Non-Calc): $f(0) = -5, f(1) = 3$
(sign change) [2m]

Q5 (Non-Calc): $x^2(3x - 1) = 5$
 $\Rightarrow x = \sqrt{\frac{5}{3x - 1}}$ [2m]

Q6 (Non-Calc): $c = -2, d = -2$ [2m]

Topic 5: Transforming Graphs

Q1 (Non-Calc): $(-1, 6)$ [2m]

Q2 (Non-Calc): $(2, -2)$ [2m]

Q3 (Non-Calc): $(-7, 3)$ [2m]

Q4 (Non-Calc): $(225, 1)$ [2m]

Q5 (Non-Calc): $a = -4$ [2m]

Q6 (Non-Calc): $y = x^2 - 2x + 6$ [3m]

Topic 6: Kinematics

Q1 (Non-Calc): 63 [2m]

Q2 (Non-Calc): 20 [3m]

Q3 (Calc): 562.5 [3m]

Q4 (Calc): 55 [3m]

Q5 (Non-Calc): 5 [3m]

Q6 (Non-Calc): 8 [4m]

Topic 7: Velocity-Time Graphs

Q1 (Calc):	288	[2m]
Q2 (Non-Calc):	3	[2m]
Q3 (Calc):	112.5	[2m]
Q4 (Non-Calc):	$V = 30$	[2m]
Q5 (Non-Calc):	2	[2m]
Q6 (Non-Calc):	(a) 12 m/s, (b) 8 m/s	[4m]

Mixed Review 1 — Choosing the Right Method (Non-Calculator) — Answers & Topic Guide

Q1 (Completing the Square, Non-Calc):	$2(x - 3)^2 + 3$	[3m]	Q2 (Kinematics, Non-Calc):	2.5	[3m]
Q3 (Transforming Graphs, Non-Calc):	(3, 7)	[2m]	Q4 (Quadratic Inequalities, Non-Calc):	$\frac{3}{2} \leq x \leq 4$	[2m]
Q5 (Iteration, Non-Calc):	$f(1) = -4, f(2) = 7$ (sign change)	[2m]	Q6 (Velocity-Time Graphs, Non-Calc):	8	[2m]
Q7 (Quad. Simultaneous, Non-Calc):	(-3, 2) and (3, -2)	[4m]	Q8 (Completing the Square, Non-Calc):	$-1 - \sqrt{11}, -1 + \sqrt{11}$	[3m]
Q9 (Kinematics, Non-Calc):	4	[3m]	Q10 (Transforming Graphs, Non-Calc):	(6, 3)	[2m]
Q11 (Quadratic Inequalities, Non-Calc):	$x < \frac{3}{2}$ or $x > 4$	[2m]	Q12 (Velocity-Time Graphs, Non-Calc):	$V = 15$	[2m]
Q13 (Iteration, Non-Calc):	$c = -3, d = -5$	[2m]	Q14 (Completing the Square, Non-Calc):	(-3, 16)	[3m]
Q15 (Quad. Simultaneous, Non-Calc):	(-3, 5) and (1, -1)	[4m]			

Mixed Review 2 — Choosing the Right Method (Calculator) — Answers & Topic Guide

Q1 (Iteration, Calc):	£56,226 [3m]	Q2 (Completing the Square, Calc):	-0.61, 6.61 [3m]
Q3 (Velocity-Time Graphs, Calc):	500 [2m]	Q4 (Transforming Graphs, Calc):	(-6, -3) [2m]
Q5 (Kinematics, Calc):	78.4 [3m]	Q6 (Quad. Simultaneous, Calc):	(3, -4) and (5, 0) [4m]
Q7 (Iteration, Calc):	2.443 [3m]	Q8 (Transforming Graphs, Calc):	$a = 3, b = -2$ [2m]
Q9 (Quadratic Inequalities, Calc):	-2, -1, 0, 1, 2, 3 [3m]	Q10 (Iteration, Calc):	0.842 [3m]
Q11 (Velocity-Time Graphs, Calc):	$V = 30$ [2m]	Q12 (Completing the Square, Calc):	-4.48, 6.48 [3m]
Q13 (Quad. Simultaneous, Calc):	(-4, 6) and (6, -4) [4m]	Q14 (Kinematics, Calc):	12 [4m]
Q15 (Quadratic Inequalities, Calc):	-5, -4, -3, -2, -1, 0 [3m]		