》Pearson

Mark Scheme (Results)

November 2025

Pearson Edexcel International GCSE In Mathematics A

4MA1/2F

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

- **Types of mark**
  - o M marks: method marks
  - o A marks: accuracy marks
  - o B marks: unconditional accuracy marks (independent of M marks)
- **Abbreviations**
  - o cao – correct answer only
  - o ft – follow through
  - o isw – ignore subsequent working
  - o SC - special case
  - o oe – or equivalent (and appropriate)
  - o dep – dependent
  - o indep – independent
  - o awrt – answer which rounds to
  - o eeoo – each error or omission

- **No working**
  If no working is shown then correct answers normally score full marks
  If no working is shown then incorrect (even though nearly correct) answers score no marks.

- **With working**
  If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

  If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks.

  If a candidate misreads a number from the question. Eg. Uses 252 instead of 255; method marks may be awarded provided the question has not been simplified. Examiners should send any instance of a suspected misread to review. If there is a choice of methods shown, mark the method that leads to the answer on the answer line; where no answer is given on the answer line, award the lowest mark from the methods shown. If there is no answer on the answer line then check the working for an obvious answer.

- **Ignoring subsequent work**

  It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: eg. Incorrect cancelling of a fraction that would otherwise be correct.

  It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect egalgebra.

  Transcription errors occur when candidates present a correct answer in working and write it incorrectly on the answer line; mark the correct answer.
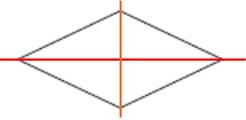
- **Parts of questions**

  Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded to another.

International GCSE Mathematics				
Values in quotation marks must come from a correct method previously seen unless clearly stated otherwise.				
Q	Working	Answer	Mark	Notes
1 (a)		Arctic Tern	1	B1 accept incorrect spellings Accept 95 786
(b)		64 000	1	B1 cao
(c)		10 767	1	B1 Allow –10 767
(d)		27 948	1	B1 Allow Pectoral sandpiper
				Total 4 marks

Q	Working	Answer	Mark	Notes
2 (a)		Correct bar	1	B1 for a bar drawn at correct height of 14 Allow a vertical line instead of a bar and allow any width of bar Allow ±2mm tolerance for height of bar
(b)		18	1	B1
(c)		Morocco	1	B1
(d)		Egypt	1	B1
				Total 4 marks

Q	Working	Answer	Mark	Notes
3 (a)		(5, 4)	1	B1
(b)		(–4, –3)	1	B1
(c)		Cross at (2, –3)	1	B1
				Total 3 marks

4	(a)		6	1	B1
	(b)(i)		rhombus	1	B1 allow parallelogram or kite Allow incorrect spellings if intention is clear
	(ii)		2 correct lines of symmetry	1	B1 Allow dashed/dotted lines Clear intention to show the 2 lines Do not allow any extra lines
	(c)		A (and) E	1	B1 Allow in any order Allow lower case
					Total 4 marks

5	(a)		0.078 0.67 0.7 0.706 0.76	1	B1
	(b)		62	1	B1
	(c)		$\dfrac{3}{5}$	1	B1
					Total 3 marks

6	(a)		15	1	B1
	(b)		÷5 or −16 or × 0.2 oe	1	B1
					Total 2 marks

7	2 × 3.25 (= 6.50) or 3.25 + 3.25 (= 6.50) or 3 × 1.75 (= 5.25) or 1.75 + 1.75 + 1.75 (= 5.25)		4	M1
	eg 2 × 3.25 + 2.6(0) + 3 × 1.75 (= 14.35) oe or eg 2 × 3.25 + 2.6(0) (= 9.1(0)) oe or 3 × 1.75 + 2.6(0) (= 7.85) oe or 2 × 3.25 + 3 × 1.75 (= 11.75) oe or eg 20 – 2 × 3.25 – 2.6(0) (= 10.9(0)) oe or 20 – 3 × 1.75 – 2.6(0) (= 12.15) oe or 20 – 2 × 3.25 – 3 × 1.75 (= 8.25) oe			M1 for adding all three or for adding any **two** of "6.5(0)" oe, "5.25" oe, 2.6(0) or for subtracting from 20 any **two** of "6.5(0)" oe, "5.25" oe, 2.6(0)
	20 – "14.35" oe or 20 – 2 × 3.25 – 3 × 1.75 – 2.6(0) oe			M1 for a fully correct method to find the change ("6.5(0)" and "5.25" to come from correct working)
	Correct answer scores full marks (unless from obvious incorrect working)	5.65		A1 SC B1 for 12.4(0)
				Total 4 marks

8	(a)	5 × 8 **and** 3 × 4.5 or 5 × 8 **and** –3 × 4.5 or 40 or 13.5 oe or –13.5 oe		2	M1 Allow dot or brackets for multiplication sign
		Correct answer scores full marks (unless from obvious incorrect working)	26.5		A1 oe SC B1 for –1.5 oe or 53.5 oe
	(b)	$5h = 30 - 8$ or $5h = 22$ or $8 - 30 = -5h$ or $-22 = -5h$ or $h + \dfrac{8}{5} = \dfrac{30}{5}$ oe or $(30 - 8) \div 5$ or $30 - 8 \div 5$ or $22 \div 5$		2	M1
		Correct answer scores full marks (unless from obvious incorrect working)	4.4		A1 oe eg $\dfrac{22}{5}$ or $4\dfrac{2}{5}$
					Total 4 marks

9	[7.8, 8.2] or [2.8, 3.2]		4	B1 May be seen on the diagram
	2 × [7.8, 8.2] + 2 × [2.8, 3.2] (= [21.2, 22.8]) oe or [7.8, 8.2] × 150 (= [1170, 1230]) or [2.8, 3.2] × 150 (= [420, 480]) or [7.8, 8.2] × 150 ÷100 (= [11.7, 12.3]) or [2.8, 3.2] × 150 ÷100 (= [4.2, 4.8])			M1ft Allow their values of length or width for this mark but not using 150 as a length or width
	[21.2, 22.8] × 150 ÷100 or [21.2, 22.8] × 150 (= [3180, 3420]) or 2 × [1170, 1230] + 2 × [420, 480] (= [3180, 3420]) oe or 2 × [11.7, 12.3] + 2 × [4.2, 4.8] oe			M1ft Allow their values of length or width for this mark but not using 150 as a length or width
	Correct answer scores full marks (unless from obvious incorrect working)	33		A1 31.8 – 34.2
				Total 4 marks

10	(a)		1849	1	B1 cao
	(b)		21	1	B1 cao
	(c)		8	1	B1 cao
	(d)		45	2	B2 for 45 (B1 for 18 or an answer of 27 or an answer of 31.5 oe)
					Total 5 marks

11	(a)		car	1	B1
	(b)	$360 - 72 - 45 - 144 \ (= 99)$ or $45 \div 5 \ (= 9)$ oe or $5 \div 45 \left(= \dfrac{1}{9} = 0.11(111...) \right)$ $360 \div 45 \times 5 \ (= 40)$		3	M1
		"99" $\div$ "9" oe or "99" $\times \dfrac{5}{45}$ oe or "40" $- 8 - 5 - 16$ oe			M1
		Correct answer scores full marks (unless from obvious incorrect working)	11		A1
	(c)		$\dfrac{1}{8}$	1	B1 oe eg 0.125 or $\dfrac{45}{360}$ or $\dfrac{5}{40}$
					Total 5 marks

12	(a)		22	1	B1 cao
	(b)	$m + h = 4r$ or $-4r = -m - h$ or $\dfrac{m}{4} = r - \dfrac{h}{4}$ oe or $m + h \div 4 = r$		2	M1
		Correct answer scores full marks (unless from obvious incorrect working)	$r = \dfrac{m+h}{4}$		A1 oe allow $r = (m + h) \div 4$ or $r = \dfrac{-m-h}{-4}$ or $r = \dfrac{m}{4} + \dfrac{h}{4}$
	(c)		$P = 27n + 40$	3	B3 for all correct eg $P = 27 \times n + 40$ oe or Allow brackets eg $P = (27)n + 40$ oe (B2 for $27n + 40$ ($\pm$ other terms) seen oe or $P = an + 40$ ($\pm$ other terms) seen where $a \neq 0$ oe or $P = 27n + b$ ($\pm$ other terms) where b can be 0 eg $P = 27n$ oe) (B1 for $an + 40$ ($\pm$ other terms) where $a \neq 0$ oe or $27n + b$ ($\pm$ other terms) where $b \neq 0$ oe or $27n$ ($\pm$ other terms) oe) Ignore any units Allow upper/lower case
					Total 6 marks

13	290 × 8.23 (= 2386(.7)) or 290 ÷ 50 (= 5.8) or 50 ÷ 8.23 (= 6(.07533…))		3	M1
	"2386(.7)" ÷ 50 (= 47(.734)) or 8.23 × "5.8" (= 47(.734)) or 290 ÷ "6….." (= 47(.734))			M1
	Correct answer scores full marks (unless from obvious incorrect working)	47		A1 cao
				Total 3 marks

14	$(d =)$ speed × time eg $(d =)$ 78 × 3 or speed $= \dfrac{(d)}{\text{time}}$ eg $78 = \dfrac{(d)}{3}$		2	M1 speed $= 78 \times 10^n$ time $= 3$ or 3×60 or 180
	Correct answer scores full marks (unless from obvious incorrect working)	234		A1
				Total 2 marks

15	$\dfrac{1}{2}(14 + 29) \times 8$ oe		2	M1 Allow $\dfrac{1}{2} \times 14 + 29 \times 8$ or $\dfrac{1}{2} \times 29 + 14 \times 8$
	Correct answer scores full marks (unless from obvious incorrect working)	172		A1
				Total 2 marks

16	24, 48, 72 …. **and** 56, 112, 168 …. or 24 × 7 **and** 56 × 3 or (24 =) 2 × 2 × 2 × 3 or $2^3 × 3$ or (56 =) 2 × 2 × 2 × 7 or $2^3 × 7$ or or eg <table><tr><td>**2**</td><td>24</td><td>56</td></tr><tr><td>**2**</td><td>12</td><td>28</td></tr><tr><td>**2**</td><td>6</td><td>14</td></tr><tr><td></td><td>**3**</td><td>**7**</td></tr></table> eg <table><tr><td>**8**</td><td>24</td><td>56</td></tr><tr><td></td><td>**3**</td><td>**7**</td></tr></table> or $\dfrac{24 \times 56}{8}$		2	M1 for any correct valid method for starting to list at least three multiples of each number or 2 × 2 × 2 × 3 seen (allow commas, dots etc) or 2 × 2 × 2 × 7 seen (allow commas, dots etc) (may be in a factor tree or a ladder tree – ignore 1) or a fully correct Venn diagram or other clear method eg. table
	Working required	168		A1 dep on M1 Accept $2^3 × 3 × 7$ or 2 × 2 × 2 × 3 × 7
				Total 2 marks
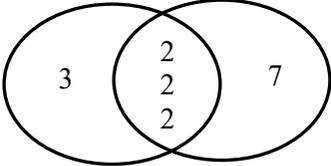
17	(a)		0 5 8 10	1	B1
	(b)			2	M1 ft for $\dfrac{8}{m}$ where $m > 8$ or $\dfrac{n}{12}$ where $n < 12$ or for $8 : 12$ oe
		Correct answer scores full marks (unless from obvious incorrect working)	$\dfrac{8}{12}$		A1 ft oe eg. $\dfrac{2}{3}$ or 0.66(666….) or 66(.666…)% truncated or rounded
					Total 3 marks

18		$(x=)\dfrac{3+9}{2}\left(=\dfrac{12}{2}\right)$ or $(y=)\dfrac{4+16}{2}\left(=\dfrac{20}{2}=10\right)$ oe or $(y=)$ 10 or (10, 6)		2	M1 for a **correct** method to work out the midpoint of x or the midpoint of y or the correct value for y or (10, 6)
		Correct answer scores full marks (unless from obvious incorrect working)	(6, 10)		A1
					Total 2 marks

19	eg $5x + y = 11$ $3x - y = 9$ Adding $(5x + 3x = 11 + 9$ or $8x = 20)$ or $3x - (11 - 5x) = 9$ or $5x + 3x - 9 = 11$	eg $15x + 3y = 33$ $15x - 5y = 45$ Subtracting $(3y - -5y = 33 - 45$ or $8y = -12)$ or $3\left(\dfrac{11-y}{5}\right) - y = 9$ oe or $5\left(\dfrac{9+y}{3}\right) + y = 11$ oe		3	M1 for a correct method to eliminate x or y: coefficients of x or y are the same **and** the correct operation to eliminate selected variable, if operator not written, the correct operation can be implied by 2 out of 3 terms correct. (condone any one arithmetic error in multiplication) **or** writing x or y in terms of the other variable and correctly substituting (condone missing brackets) **NB** The mark is for the method and not for the result of the method. However, if the correct result of the method is seen, the mark can be awarded.
	eg $5 \times$ "2.5" $+ y = 11$ or $3 \times$ "2.5" $- y = 9$ or $11 - 5 \times$ "2.5" or $3 \times$ "2.5" $- 9$	eg $5x - 1.5 = 11$ oe or $3x - -1.5 = 9$ or $\dfrac{11 - "-1.5"}{5}$ oe or $\dfrac{9 + "-1.5"}{3}$			M1 dep for correct substitution to find second variable using their value from a correct method to find first variable **or** for repeating above method to find second variable.
	Working required		$x = 2.5$ $y = -1.5$		A1 oe dep on M1
					Total 3 marks

20	eg $1 - \dfrac{7}{20}\left(=\dfrac{13}{20}\right)$ or $1 - 0.35 (= 0.65)$ oe or $100\% - 35\% (= 65\%)$ or $(9 + 43) \div (20 - 7)$ or $52 \div 13$ or (Y : R & B =) 7 : 13 or $\dfrac{x}{9 + 43 + x} = \dfrac{7}{20}$ oe or $\dfrac{7}{20} \times (9 + 43 + x) = x$ oe or $\dfrac{y - 9 - 43}{y} = \dfrac{7}{20}$ oe or $\left(1 - \dfrac{7}{20}\right) \times y = 9 + 43$ oe or $9 \times 35 + 43 \times 35 (= 52 \times 35)$		4	M1 for a correct first step **seen** eg $\dfrac{13}{20}$ or for any correct equation that would lead to 28 or 80 (*x* = number of yellow bricks and *y* = total number of bricks)
	(*x* =) 28 or (*y* =) 80 or 1820 or 2800			A1 28 or 80 may be seen as a fraction 1820 is the weight of the red and blue bricks 2800 is the total weight of the bricks
	eg ("80" − 9 − 43) × 35 oe or ("80" − 52) × 35 oe or $80 \times \dfrac{7}{20} \times 35$ oe or "28" × 35 or "1820" ÷ 13 × 7 oe			M1 If the first step is to form a correct algebraic equation then ft their found value of *x* or *y*
	Correct answer scores full marks (unless from obvious incorrect working)	980		A1
				Total 4 marks

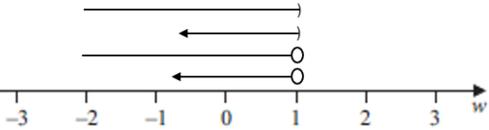| 21 | eg $28 \div 7 \ (= 4)$ or $7 \div 28 \left(= \dfrac{1}{4}\right)$ oe or $28 : 7$ oe or $7 : 28$ oe or

 $18 \div 6 \ (= 3)$ or $6 \div 18 \left(= \dfrac{1}{3} = 0.33(333….)\right)$ oe $18 : 6$ oe or $6 : 18$

 oe

 or 12 or $\dfrac{1}{12} \left(= 0.083(33...)\right)$ oe or $1 : 12$ oe or $12 : 1$ oe

 or

 $\dfrac{(FG)}{60} = \dfrac{7}{28}$ oe or $(FG =) \ 15$ or $60 : 28 \ (=) \ FG : 7$ oe

 or

 $\dfrac{(IJ)}{6} = \dfrac{7}{18}$ oe or $\left(IJ =\right) \dfrac{7}{3} \left(= 2.3(333...)\right)$ oe | | 3 | M1 for a correct SF can be expressed as a fraction, decimal or ratio (may or may not be used)

 NB $\dfrac{6 \times 7}{18 \times 28} = \dfrac{42}{504} = \dfrac{1}{12}$

 or

 for a correct equation (*FG* or *IJ*) Allow any letter for their side

 NB 15 may be written on the diagram for *FG* or 2.3(333…) oe may be written on the diagram for *IJ* |
	eg $60 \div \text{“4”} \div \text{“3”}$ oe or $60 \div \text{“12”}$ oe or $\text{“15”} \div \text{“3”}$ oe or $60 \times "\dfrac{1}{4}" \times "\dfrac{1}{3}"$ oe or $60 \times "\dfrac{1}{12}"$ oe or $60 \div \text{“12”}$ or $(JK =) "15" \times \dfrac{6}{18}$ oe or $(JK =) 60 \times \dfrac{"\frac{7}{3}"}{28}$ oe			M1 Allow $\dfrac{7}{3} = 2.3(333...)$
	Correct answer scores full marks (unless from obvious incorrect working)	5		A1 **NB** *JK* = 5 may be written on the diagram if no answer on the answer line
				Total 3 marks

22	(a)	$87 - 75 \ (= 12)$ or $\dfrac{87}{75}(=1.16)$ oe		3	M1
		$\dfrac{"12"}{75}(\times 100)\big(= 0.16(\times 100)\big)$ oe or $\dfrac{87}{75}\times 100 \big(=116\big)$ oe or $"1.16" \times 100 \big(=116\big)$ oe			M1
		Correct answer scores full marks (unless from obvious incorrect working)	16		A1
	(b)	$0.2 \times 960 \ (= 192)$ oe or $0.8 \times 960 \ (= 768)$ oe or $0.8 \times 0.8 \times 960 \ (= 614.4)$ oe or $0.8^3 \ (= 0.512)$ oe		3	M1 NB Use of % sign to indicate the calculation, eg $80\% \times 960$, is **not** sufficient for this mark unless an answer of 768 is stated for this calculation
		$0.8^3 \times 960$ oe or $0.8 \times 0.8 \times "768"$ oe or $0.8 \times "614.4"$ oe or $0.2 \times "768" \ (= 153.6)$ **and** $0.2 \times ("768" - "153.6") \ (= 122.88)$ oe or $"192" + "153.6" + "122.88" \ (= 468.48)$			M1 NB Use of % sign to indicate the calculation, eg $(1 - 20\%)^3 \times 960$, is **not** sufficient for this mark unless an answer of 491.52 is stated for this calculation
		Correct answer scores full marks (unless from obvious incorrect working)	491.52		A1 491 - 492 SC B2 for $0.8^4 \times 960 \ (= 393(.216))$ If no other mark awarded, SCB1 for $960 \times 0.2 \times 3 \ (= 576)$ oe or $960 \times 0.4 \ (= 384)$ oe or $960 + 960 \times 0.2 \times 3 \ (= 1536)$ oe or $960 \times 1.6 \ (= 1536)$ oe or $1.2 \times 960 \ (= 1152)$ oe or $1.2^2 \times 960 \ (= 1382(.4))$ oe or $1.2^3 \times 960 \ (= 1658(.88))$ oe
					Total 6 marks

23	$160 = \pi \times$ [any variable] or $160 = 2 \times \pi \times$ [any variable] or $160 = \pi \times 3 \times$ [any variable] or $160 = 2 \times \pi \times$ [any variable]	$(C_2 =) 160 \div 3 \ (= 53.3(333\ldots))$		5	M1 Do not accept $\pi\, "R"^2 = 160$ D = diameter of large circle (C_1) R = radius of large circle (C_1) d = diameter of small circle (C_2) r = radius of small circle (C_2) **NB** $C_1 = 3 \times C_2$ Allow 3.14… or $\dfrac{22}{7}$ for π
	$(D =) \dfrac{160}{\pi} \ (= 50.9(29\ldots))$ or $(R =) \dfrac{160}{2\pi} \ (= 25.4(647\ldots))$	$(d =) 160 \div 3 \div \pi \left(= \dfrac{160}{3\pi} = 16.9(765\ldots) \right)$ or $2\pi r = \dfrac{160}{3}$			M1 must come from a correct circumference formula Do not accept $"R"^2 = \dfrac{160}{\pi}$ This mark implies first M1
	$(r =) \text{“}50.9\text{”} \div 6 \ (= 8.48(826\ldots))$ or $(r =) \text{“}25.4\text{”} \div 3 \ (= 8.48(826\ldots))$	$(r =) 160 \div 3 \div \pi \div 2 \left(= \dfrac{160}{6\pi} = 8.48(826\ldots) \right)$			M1
	$\pi \times "8.48"^2 \ (226(.353\ldots))$				M1
	Correct answer scores full marks (unless from obvious incorrect working)		226		A1 awrt 226 or awrt 227
					Total 5 marks

24	(i)	$(x \pm 6)(x \pm 8)$ or $(6 \pm x)(8 \pm x)$ or $x(x + 8) - 6(x + 8)$ or $x(x - 6) + 8(x - 6)$		2	M1 for $(x \pm 6)(x \pm 8)$ or for brackets in the form $(x + a)(x + b)$ where $ab = -48$ or $a + b = 2$
		Correct answer scores full marks (unless from obvious incorrect working)	$(x - 6)(x + 8)$		A1 oe Allow any letter for x
	(ii)		6, –8	1	B1ft follow through from (i) and must be 2 answer values provided $(x + a)(x + b)$ seen in either parts (i) or (ii) seen
					Total 3 marks

25	(a)		57 600	1	B1
	(b)	$\dfrac{308\,000}{4 \times 10^{-2}}$ or $\dfrac{308\,000}{0.04}$ or $\dfrac{308 \times 10^3}{4 \times 10^{-2}}$ or $\dfrac{308 \times 10^3}{0.04}$ or $\dfrac{3.08 \times 10^5}{4 \times 10^{-2}}$ or $\dfrac{3.08 \times 10^5}{0.04}$ or $\dfrac{300\,000 + 8000}{4 \times 10^{-2}}$ or $\dfrac{300\,000 + 8000}{0.04}$ oe or 7 700 000 or $75 \times 10^5 + 2 \times 10^5$ or 77×10^5 oe or 7.7×10^n where $n \neq 6$		2	M1
		Correct answer scores full marks (unless from obvious incorrect working)	7.7×10^6		A1
					Total 3 marks

26	120 × 0.45 (= 54) oe or 80 × 0.3 (= 24) oe or 78 or 120 × (1 – 0.45) (= 66) oe or 80 × (1 – 0.3) (= 56) oe or 122		3	M1 for a correct first step **seen** eg 120 × 0.45 or 54
	$\dfrac{"54"+"24"}{120+80}$ oe or $1-\left(\dfrac{"66"+"56"}{120+80}\right)$ oe			M1
	Correct answer scores full marks (unless from obvious incorrect working)	$\dfrac{39}{100}$		A1 oe eg. 0.39 or $\dfrac{78}{200}$ oe or 39% M2 A0 for 78 : 200 or 39 : 100
				Total 3 marks

27	(a)		Open circle at $w = 1$ **and** a line with an arrow to the left	1	B1 for an open circle at $w = 1$ and a line with an arrow of any length to the left Allow) for an open circle Allow a line without an arrow if it reaches to at least –2
	(b)		$y \geq x$	3	B1 oe allow > in place of ≥
			$y \leq 4$		B1 oe allow < in place of ≤
			$x \geq -3$		B1 oe allow > in place of ≥
					If no marks have been awarded then SCB2 for identifying the outside region eg $y \leq x$, $y \geq 4$ and $x \leq -3$ oe SCB1 for identifying ALL 3 lines eg $y = x$, $y = 4$ and $x \leq -3$ oe Allow < in place of ≤ or vice versa
					Total 4 marks

28	$240 = \dfrac{1}{2} \times 30 \times (AC)$ or $240 = \dfrac{1}{2} \times 30 \times (AC) \times \sin 90$ or $(AC =) \dfrac{240 \times 2}{30} (= 16)$ or $(AC =) \dfrac{240 \times 2}{30 \times \sin 90} (= 16)$		4	M1
	$(BC^2 =) 30^2 + \text{"}16\text{"}^2 (= 1156)$ or $(BC^2 =) 30^2 + \text{"}16\text{"}^2 - 2 \times 30 \times 16 \times \cos 90 (= 1156)$ or $(ABC =) \tan^{-1}\left(\dfrac{\text{"}16\text{"}}{30}\right) (= 28.0(724...))$ or $(ACB =) \tan^{-1}\left(\dfrac{30}{\text{"}16\text{"}}\right) (= 61.9(275...))$			M1 dep on M1 ft their AC value provided the first M1 has been awarded
	$(BC =) \sqrt{30^2 + \text{"}16\text{"}^2} \left(= \sqrt{1156} = 34\right)$ or $(BC =) \sqrt{30^2 + \text{"}16\text{"}^2 - 2 \times 30 \times 16 \times \cos 90} \left(\sqrt{1156} = 34\right)$ or $(BC =) \dfrac{\text{"}16\text{"}}{\sin(\text{"}28.0\text{"})} (= 34)$ or $(BC =) \dfrac{30}{\cos(\text{"}28.0\text{"})} (= 34)$ or $(BC =) \dfrac{\text{"}16\text{"}}{\cos(\text{"}61.9\text{"})} (= 34)$			M1
	Correct answer scores full marks (unless from obvious incorrect working)	80		A1 Allow 79.9 – 80.1 SCB2 for 69(.048…) SCB1 for 31(.048…) – 31.1 or $\sqrt{964}$ or $2\sqrt{241}$
				Total 4 marks