1380_1F					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		430	1	B1 cao
	(b)		1.8	1	B1 cao
	(c)	340	340 correctly marked	1	B1 cao
	(d)	4.9	4.9 correctly marked	1	B1 cao
2	(a)		480	1	B1 cao
	(b)	$\overset{1}{\cancel{2}}\,\overset{9}{0}\,\overset{1}{\cancel{5}}$ $-\ 3\ 7$ $1\ 6\ 8$ **OR** $2\ 0\ \overset{1}{\cancel{5}}$ $-\ 1\ \overset{4}{\cancel{3}}\ 7$ $1\ 6\ 8$ **OR** 37 + 63 = 100 100 + 100 = 200 200 + 5 = 205	168	2	M1 for decomposition method A1 cao **OR** M1 for equal addition method A1 cao **OR** M1 for addition method to reach 100, 200 and 205 A1 cao **SC:** B1 for 2 digits correct in the answer with answer less than 205
	(c)		54	1	B1 cao

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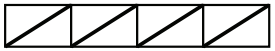
Question		Working	Answer	Mark	Notes
3	(a)		Correct diagram	1	B1 cao (may be amended pattern 3)
	(b)	<table><tr><td>**Pattern Number**</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>**Number of sticks**</td><td>5</td><td>9</td><td>13</td><td>**17**</td><td>**21**</td></tr></table>	17, 21	2	B1 for 17 or ft diagram B1 for 21 or '17'+ 4 evaluated
	(c)		33	1	B1 cao
	(d)		No + reason	1	B1 e.g. all number are sticks are odd
4	(a)		26 15	2	B1 cao B1 cao
	(b)		+ 6 or × 1.3	1	B1 for + 6 or × 1.3
5	(a)		Correct matching	3	B3 for all 4 correct (B2 for 2 or 3 correct) (B1 for 1 correct)
	(b)		6	1	B1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
6	(a)	$\frac{8}{10}$	$\frac{4}{5}$	2	B2 cao (B1 for $\frac{8}{10}$ or 0.8 or 80%) **SC:** Award B1 for an answer of $\frac{1}{5}$
	(b)	$50 \div 10$ or $\frac{10}{100} \times 50$	5	2	M1 for $50 \div 10$ oe A1 cao (accept 5.00)
	(c)		0.75	1	B1 for 0.75 or .75
7		$24 \div 2 = 12$ $24 \div 3 = 8$ $24 - 12 - 8$ **OR** $\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$ $\frac{5}{6} \times 24 = 20$ $24 - 20$ or $\frac{1}{6} \times 24 = 4$	4	3	M1 for $24 \div 2$ oe or $24 \div 3$ M1 (dep) for $24 - \frac{24}{2} - \frac{24}{3}$ A1 cao **OR** M2 for $24 - (\frac{1}{2} + \frac{1}{3}) \times 24$ oe **or** $\frac{1}{6} \times 24$ oe (M1 for $\frac{1}{2} + \frac{1}{3}$ or $\frac{5}{6}$ seen) A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
8		4.8 × 4 = 19.2 3.6 × 3 = 10.8 19.2 + 10.8 **OR** 4.8 + 3.6 = 8.4 3 × 8.4 = 25.2 25.2 + 4.8	30.0	2	M1 for adding 4 lots of 4.8 and 3 lots of 3.6 oe A1 cao (accept 30) **OR** M1 for 4.8 × 4 + 3.6 × 3 A1 cao (accept 30) **OR** M1 for (4.8 + 3.6) × 3 + 4.8 A1 cao (accept 30)
9	(a) (b) (c)		$4x$ $3y$ $8p$	1 1 1	B1 cao B1 cao B1 cao
10		400 + 400 = 800 800 × 5 = 4000 4000 ÷ 1000 **OR** 400 m = 0.4 km 0.4 + 0.4 = 0.8 0.8 × 5	4	3	M2 for 5 × (400 + 400) oe (= 4000) or 5 × (400 ÷ 1000) oe (= 2) or 5 × 400 + 5 × 400 oe (= 4000) or adding 400 ten times (= 4000) (M1 for 400 + 400 oe (= 800) or 400 ÷ 1000 oe (= 0.4) or 5 × 400 oe (= 2000) A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
11	(a)	$10 \times 4 = 40$	40	2	M1 for 10×4 A1 cao
	(b)		Length 20 Width 8	2	M1 for 10×2 or 4×2 or sight of 20 or 8 A1 cao
12	(a)		12	1	B1 cao
	(b)		9	1	B1 cao
	(c)		Thursday: 4 circles	1	B1 for 4 circles oe
	(d)		Friday: 2 circles, 1 semicircle	1	B1 for 2 circles, 1 semicircle oe
13	(a)		Row A	1	B1 for Row A (accept A)
	(b)		19	1	B1 cao
	(c)		1 or 100 or both	1	B1 for 1 or 100 or both
	(d)		128	1	B1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
14	(a)		180	1	B1 180
	(b)(i)		40	2	B1 cao
	(ii)	Vertically opposite angles are equal or sight of 140 and sum of angles on a straight line is 180	Reason		B1 eg vertically opposite angles are equal eg sight of 140 **and** sum of angles on a straight line is 180
	(c)		10	1	B1 cao
	(d)	180 – 80 – 40	60	2	M1 for 180 – 80 – '40' A1 ft from '40'
15	(a)	(S, C) (S, F) (S, O) (M, C) (M, F) (M, O)	list of 6 meals	2	B2 cao (B1 for at least 3 more correct pairs and no incorrect pairs or all correct pairs with repeats)
	(b)		$\frac{1}{6}$	1	B1 ft from (a)
	(c)		Reason	1	B1 e.g. lists more than one new combination e.g. there will be 9 different meals e.g. there will be 3 more meals

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Question		**Working**	**Answer**	**Mark**	**Notes**
16			Correct quadrilateral	4	B1 for AB correct (tol ± 2mm) B1 for angle A or angle B correct (tol ± 2^o) B1 for AD or BC correct (tol ± 2mm) B1 for fully correct within overlay
17	(a)	$\frac{2}{3}\times\frac{9}{10}=\frac{2\times9}{3\times10}=\frac{18}{30}=\frac{3}{5}$ **OR** $\frac{2}{3}\times\frac{9}{10}=\frac{\cancel{2}1}{\cancel{3}1}\times\frac{\cancel{9}3}{\cancel{10}5}=\frac{3}{5}$	$\frac{3}{5}$	2	M1 for $\frac{2\times9}{3\times10}$ oe (or $\frac{18}{30}$ or $\frac{9}{15}$ or $\frac{6}{10}$) A1 cao **OR** M1 for at least one correct cancel A1 cao
	(b)	$7\times\frac{2}{3}=\frac{14}{3}$ **OR** $\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}+\frac{2}{3}$	$4\frac{2}{3}$	2	M1 for $7\times\frac{2}{3}$ A1 for $4\frac{2}{3}$ oe or $\frac{14}{3}$ oe or 4.66 to 4.67 **OR** M1 for $\frac{2}{3}$ added 7 times A1 for $4\frac{2}{3}$ oe or $\frac{14}{3}$ oe or 4.66 to 4.67

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Question		**Working**	**Answer**	**Mark**	**Notes**
18	(a)(i)		$\frac{5}{12}$	3	B1 for $\frac{5}{12}$ oe
	(ii)		$\frac{7}{12}$		M1 for $1 - \text{`}\frac{5}{12}\text{'}$ **or** $\frac{6+1}{5+6+1}$ **or** $\frac{7}{n}$ where $n > 7$ **or** $\frac{k}{12}$ where $k < 12$ A1 for $\frac{7}{12}$ oe eg. 0.58(33…) **or** ft (i) **SC** : Award B1 for 7 : 12 **or** 7 out of 12
	(b)	$\frac{1}{3} = \frac{5}{15}$ or 1 : 3 = 5 : 15 $15 - 5 - 6 = 4$ **OR** $\frac{x+12}{5} = 3$ $x = 3$ $3 + 1$	4	2	M1 for $\frac{1}{3} = \frac{5}{15}$ or 15 seen or 3 more green A1 cao **OR** M1 for $\frac{x+12}{5} = 3$ A1 cao **SC** : Award B1 for an answer of $\frac{4}{15}$

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Question		**Working**	**Answer**	**Mark**	**Notes**
19		$= \frac{60 \times 0.8}{200} = \frac{48}{200} = 0.24$	0.24	3	B1 for any two of 60, 0.8, 200 seen **or** 48 seen M1 for at least one of 60, 0.8, 200 and a correct method to begin to evaluate eg. the numerator may be correctly evaluated or the fraction may be correctly (but not necessarily fully) simplified A1 for an answer in the range 0.15 to 0.3 from correct working
20	(a)	$13x + 1 = 11x + 8$ $13x - 11x = 8 - 1$	3.5	2	M1 for showing the intention to isolate either the algebraic or the numerical terms in an equation A1 for 3.5 or $3\frac{1}{2}$ or $\frac{7}{2}$ oe
	(b)	$2y = 4 \times 5$	10	2	M1 for multiplying both sides by 5 or dividing both sides by 2 A1 cao **OR** M1 for $y = 4 \times \frac{5}{2}$ or $y = 4 \div \frac{2}{5}$ A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
21	(a)		Correct frequency polygon	2	B2 for fully correct polygon. Points plotted at the midpoints ± ½ square (B1 for all points plotted accurately not joined or one error or one omission in plotting but joined) or all points plotted accurately and joined with first joined to last or all points at the correct heights and consistently within or at the ends of the intervals and joined (can include joining last to first to make a polygon).
	(b)	20 + 12 + 10 + 8 + 6	56	2	M1 for 20 + 12 + 10 + 8 + 6 A1 cao
	(c)		$0 \leq L < 10$	1	B1 for $0 \leq L < 10$ oe
22	(a)		$a + 2b$	2	M1 for $2a - a$ $(= a)$ **or** $3b - b$ $(= 2b)$ A1 for $a + 2b$ **or** $1a + 2b$
	(b)		$8m - 12n$	1	B1 cao

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Question		Working	Answer	Mark	Notes
23	(a)		150	1	B1 for 150 or 150°
	(b)		95 + reasons	2	B1 for 95 or 95° B1 for full reasons eg <u>alternate</u> angles are equal **and** the sum of angles on a straight <u>line</u> is <u>180</u> eg the sum of angles on a straight <u>line</u> is <u>180</u> **and** <u>corresponding</u> angles are equal eg vertically <u>opposite</u> **and** <u>co-interior</u> (<u>allied</u>) angles add up to 180
24	(a)	<table><tr><td>x</td><td>−2</td><td>−1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>y</td><td>−8</td><td>**−3**</td><td>2</td><td>**7**</td><td>**12**</td><td>17</td></tr></table>	–3, 7, 12	2	B2 for all 3 correct (B1 for 1 or 2 correct)
	(b)		Correct graph	2	B2 for correct straight line between $x = –2$ and $x = 3$ (B1 for a line which passes through (0, 2) or for a line with gradient 5 or for at least 5 points from their table plotted correctly ± ½ square)
	(c)	Read off 10 from graph	1.6	1	B1 for 1.6 ± 0.1 or ft straight line segment with positive gradient ± 0.1

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Question		**Working**	**Answer**	**Mark**	**Notes**
25		Area of $ABCD = 12^2 = 144$ $AN = 3$ cm Area of $AND = \frac{1}{2}\times 3\times 12 = 18$ cm^2 $MB = 6$ cm, $NB = 9$cm Area of $MBN = \frac{1}{2}\times 6\times 9 = 27$ cm^2 Area of shaded region = 144 – 27 – 18 **OR** $AN = 3$ cm or $BN = 9$ cm Area of rect **X** on $CM = 6\times 9 = 54$ Area of triangle **Y** $= \frac{1}{2}\times 6\times 9 = 27$ Area of top triangle **Z** $= \frac{1}{2}\times 3\times 12 = 18$ Area of shaded region = 54+27+18 **OR** $AN = 3$ cm or $BN = 9$ cm Area of $CNM = \frac{1}{2}\times 6\times 9 = 27$ cm^2 Area of $CND = \frac{1}{2}\times 12\times 12 = 72$ cm^2 Area of shaded region = 72 + 27	99	6	B1 for $AN = 3$ or $BN = 9$ or $CM = 6$ or $MB = 6$ M1 for area of $ABCD = 12 \times 12$ (= 144) M1 for area of $AND = \frac{1}{2}\times '3'\times 12$ (= 18) M1 for area of $MBN = \frac{1}{2}\times '6'\times '9'$ (= 27) M1 dep on one previous M1 for area of CMND = '144' – '18' – '27' A1 cao **OR** B1 for $AN = 3$ or $BN = 9$ or $CM = 6$ or $MB = 6$ M1 for area of rect on CM = '6' × '9' (= 54) M1 for area of adj $\Delta = \frac{1}{2}\times '6'\times '9'$ (= 27) M1 for area of top $\Delta = \frac{1}{2}\times '3'\times 12$ (= 18) M1 dep on one previous M1 for '54'+'27'+'18' A1 cao **OR** B1 for $AN = 3$ or $BN = 9$ or $CM = 6$ or $MB = 6$ M2 for area of $CNM = \frac{1}{2}\times '6'\times '9'$ (= 27) M1 for area of $CND = \frac{1}{2}\times 12\times 12$ (= 72) M1 dep on one previous M1 for '72' + '27' A1 cao

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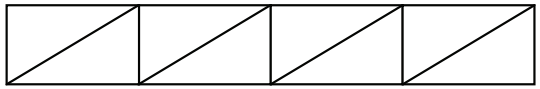
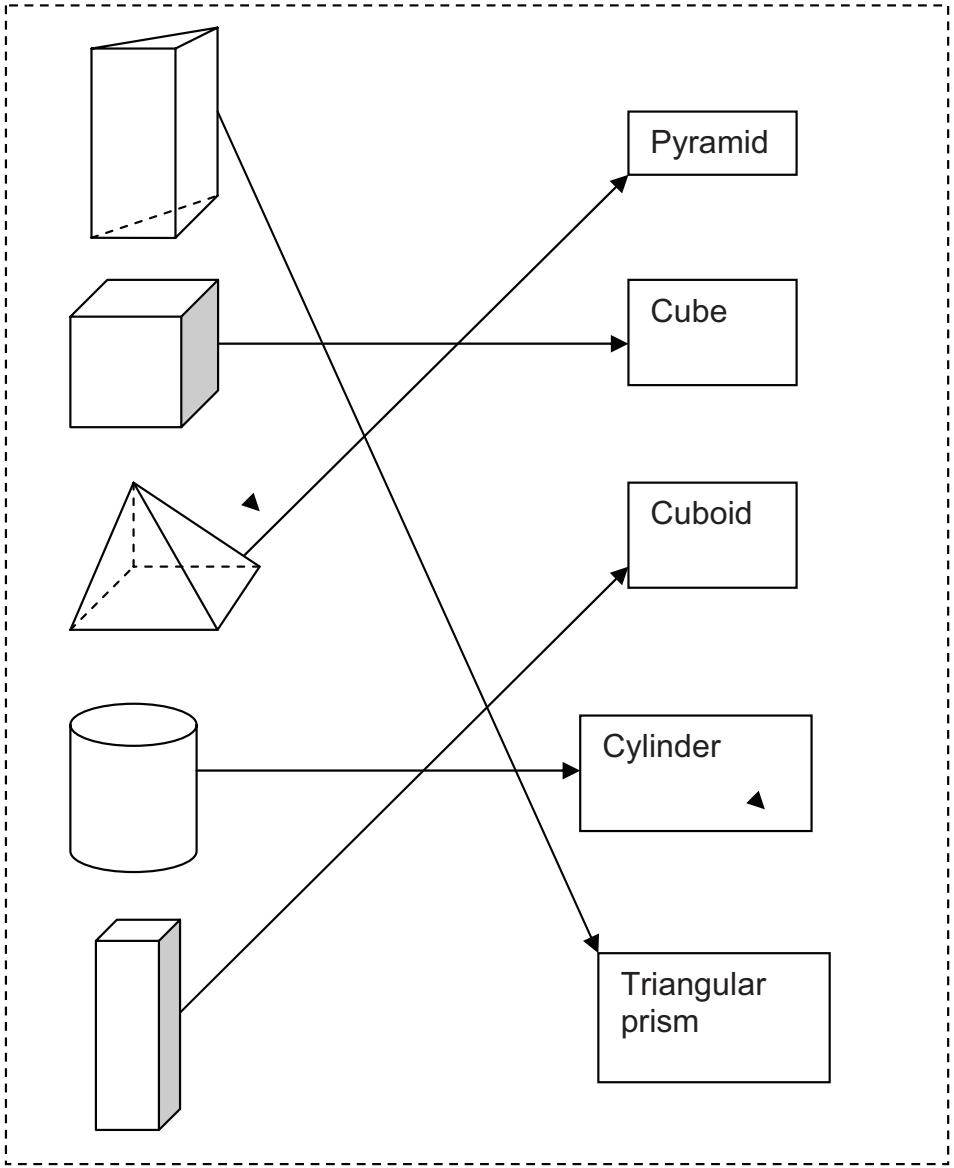
Question		**Working**	**Answer**	**Mark**	**Notes**
25 (contd)		**OR** Area of $PDN = \frac{1}{2}\times'3'\times12 = 18$ cm^2 Area of $CMNP = \frac{1}{2}\times(12+'6')\times'9'$ $= 81$ cm^2 Area of shaded region $= 18 + 81$			**OR** B1 for $AN = 3$ or $BN = 9$ or $CM = 6$ or $MB = 6$ M1 for area of $PDN = \frac{1}{2}\times'3'\times12$ $(= 18)$ M2 for area of $CMNP = \frac{1}{2}\times(12+'6')\times'9'$ $(= 81)$ M1 dep on one previous M1 for '18' + '81' A1 cao

3.



Pattern number 4

5.



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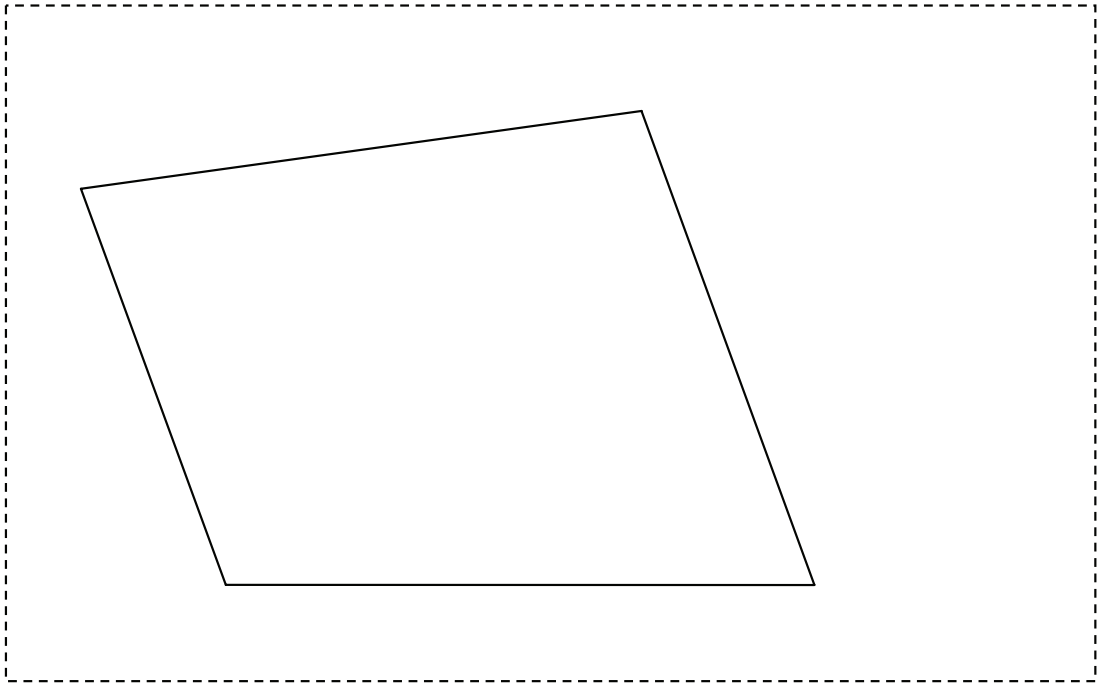

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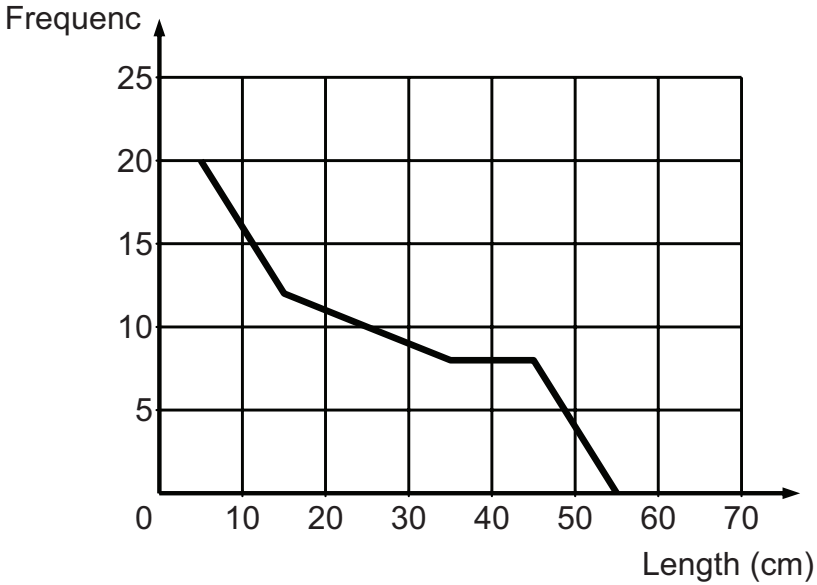

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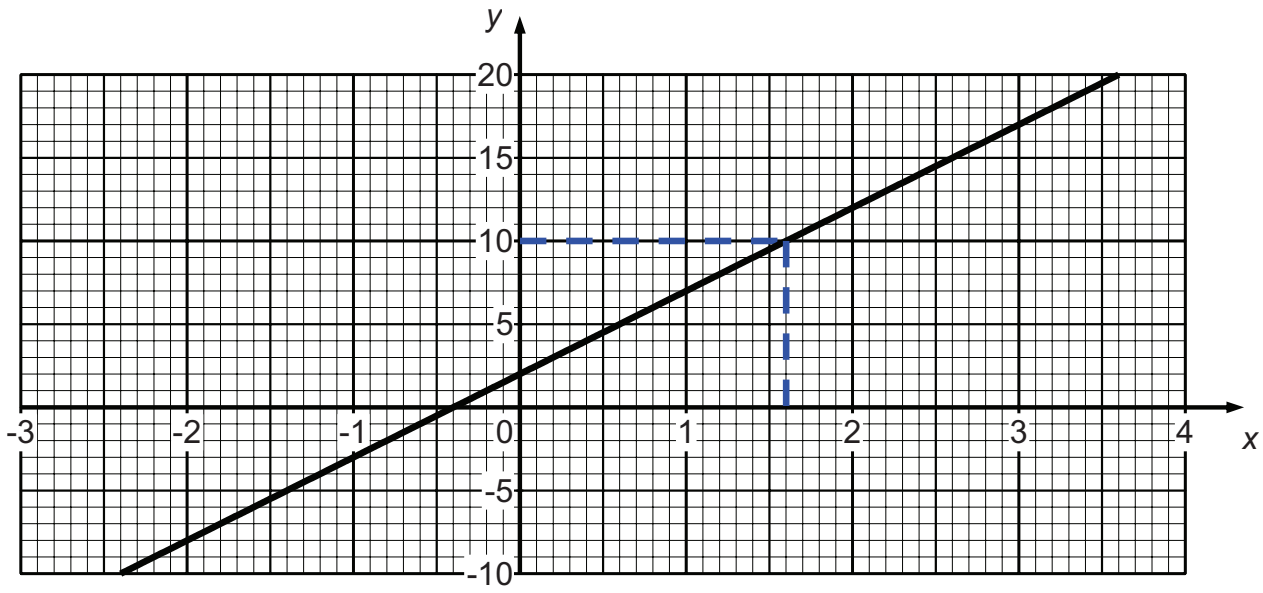

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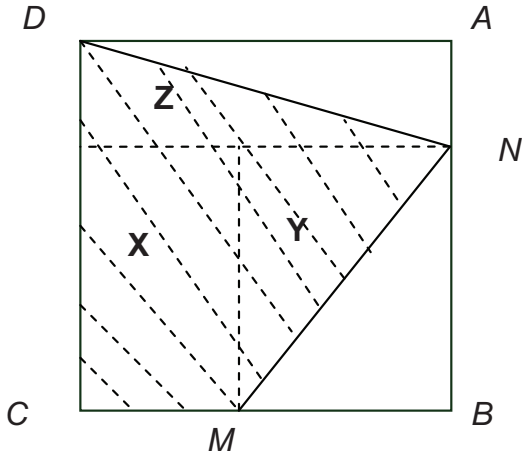

Diagram NOT accurately drawn