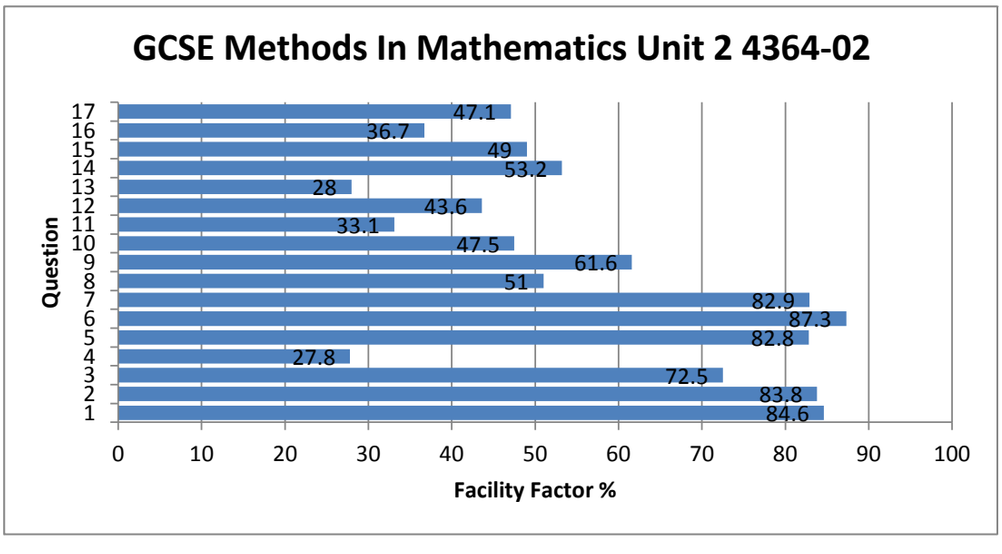
WJEC 2014 Online Exam Review

GCSE Methods In Mathematics Unit 2 4364-02

All Candidates' performance across questions

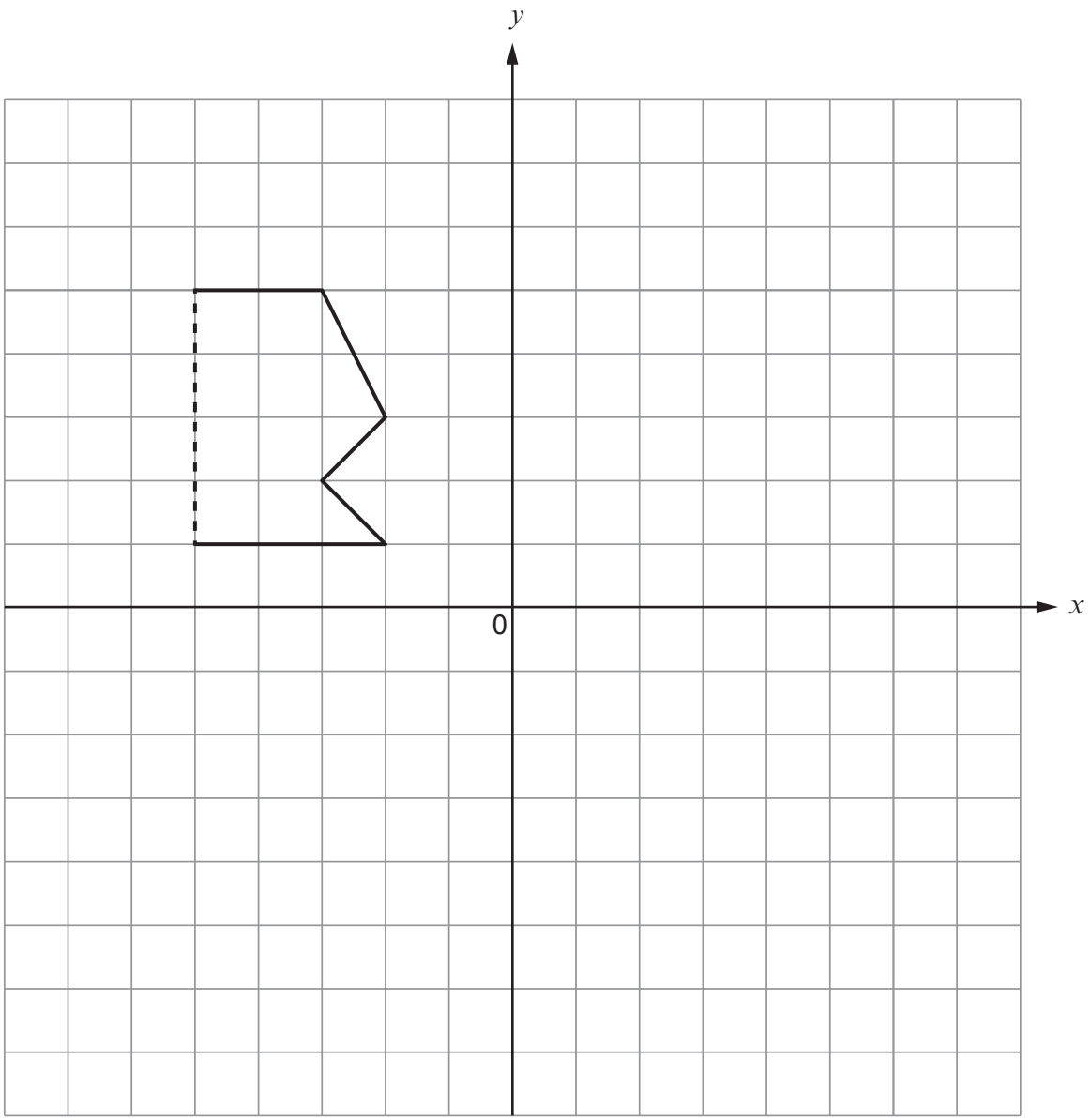
Question Title	N	Mean	S D	Max Mark	F F	Attempt %
1	606	2.5	0.9	3	84.6	100
2	606	8.4	1.9	10	83.8	100
3	606	10.2	3.2	14	72.5	100
4	596	2.5	2.6	9	27.8	98.3
5	606	3.3	1.3	4	82.8	100
6	591	2.6	0.9	3	87.3	97.5
7	604	1.7	0.7	2	82.9	99.7
8	562	3.1	2.6	6	51	92.7
9	606	4.9	2.4	8	61.6	100
10	572	2.9	2.2	6	47.5	94.4
11	527	1.7	1.5	5	33.1	87
12	573	1.3	1.4	3	43.6	94.5
13	570	1.7	2.3	6	28	94.1
14	605	3.2	2.1	6	53.2	99.8
15	576	1	0.8	2	49	95
16	556	1.8	1.7	5	36.7	91.8
17	562	3.8	3.4	8	47.1	92.7

1
2
3



Examiner only

1. Part of a shape is shown on the grid.
The dotted line is the line of symmetry of the shape.
Complete the drawing of the shape and then rotate your complete shape through 180° about the origin. [3]



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Examiner only

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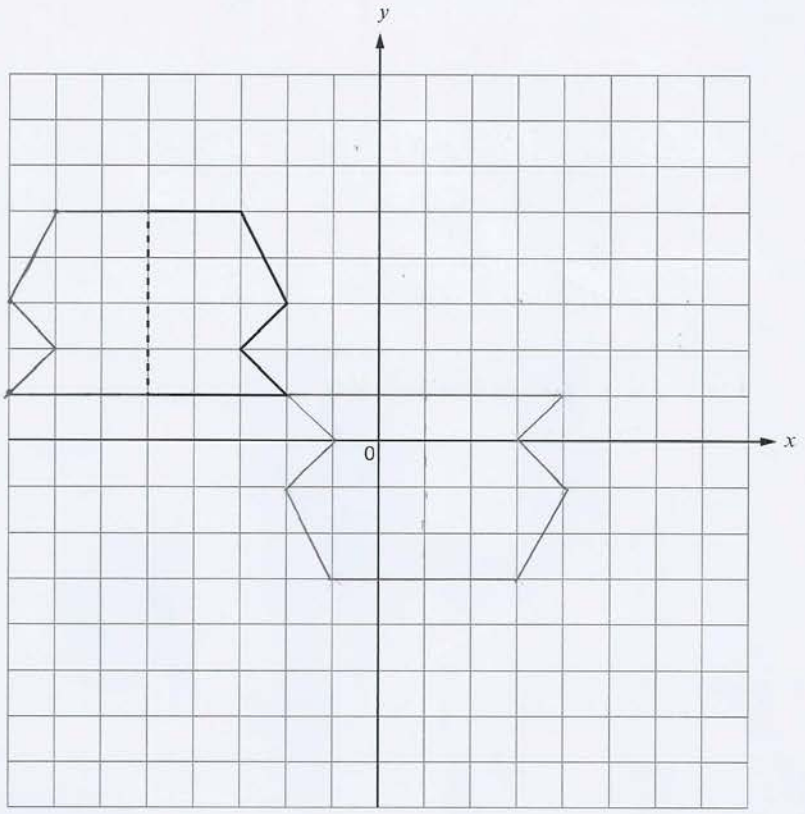

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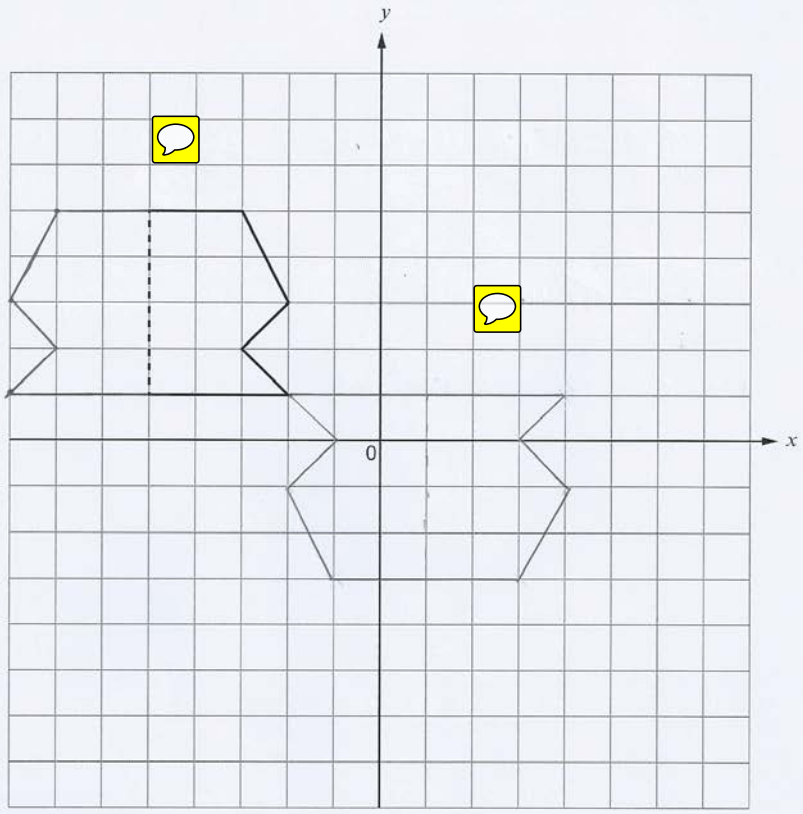

B1

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1

Examiner only

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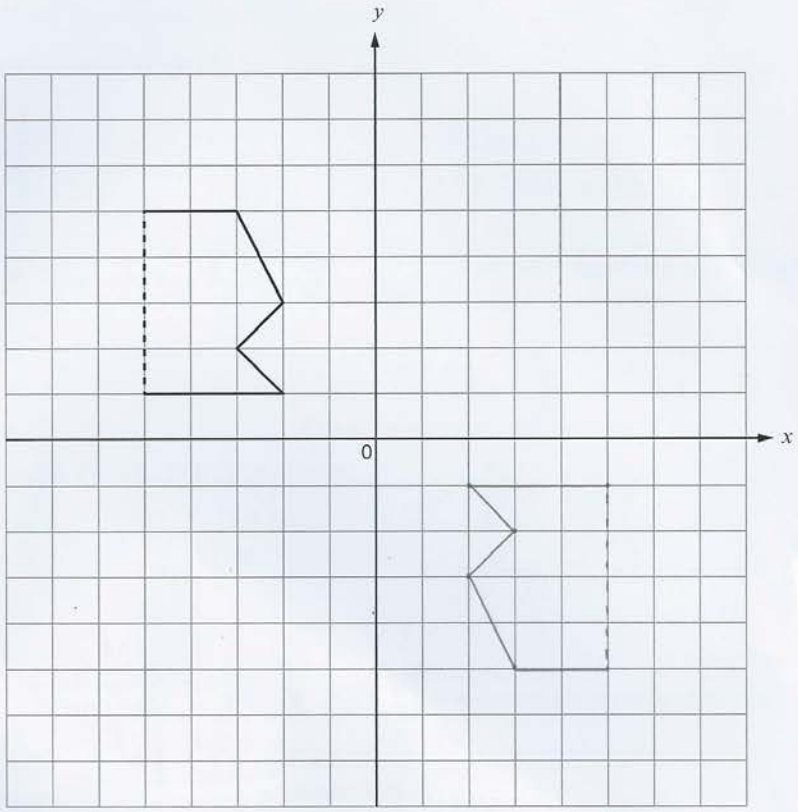

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Examiner only

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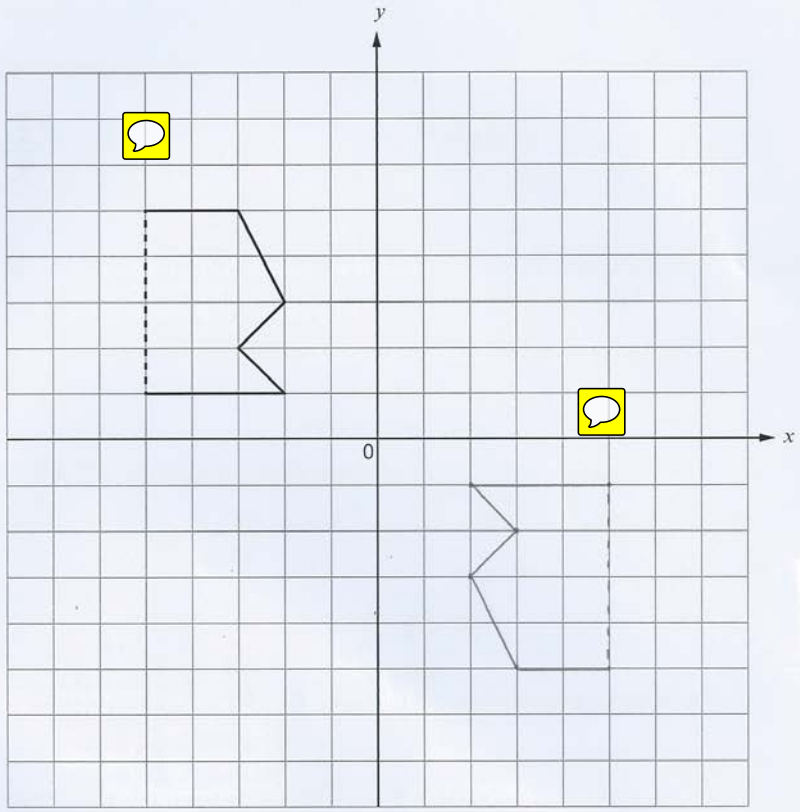

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B1

(1)

Examiner only

2. *(a)* Solve $\frac{5x}{8} = 10$. [2]

(b) Solve $\frac{28}{x} = 7$. [1]

(c) Solve $6(3x - 17) = 42$. [3]

(d) Solve the inequality $9x + 5 < 77$. [2]

(e) Write down the greatest whole number that satisfies the inequality $5x < 85$. [2]

Examiner only

2. *(a)* Solve $\frac{5x}{8} = 10$. [2]

$\frac{5x}{8} = 10 \quad \frac{5 \times 18}{8} = 11.25 \quad \frac{5 \times 16}{8} = 10$

(b) Solve $\frac{28}{x} = 7$. [1]

$\frac{28}{x} = 7 \quad 4 \times 7 = 28 \quad \frac{28}{4} = 7$

(c) Solve $6(3x - 17) = 42$. [3]

$18x - 17 = 42 \quad +17$

$+17$

$18x = 59$

$59 \div 18 = 3.2777$

$x = 3.3$

(d) Solve the inequality $9x + 5 < 77$. [2]

(e) Write down the greatest whole number that satisfies the inequality $5x < 85$. [2]

Examiner only

2. *(a)* Solve $\frac{5x}{8} = 10$. [2]

$\frac{5x}{8} = 10$ $\frac{5 \times 18}{8} = 11.25$ $\frac{5 \times 16}{8} = 10$

2

(b) Solve $\frac{28}{x} = 7$. [1]

$\frac{28}{x} = 7$ $4 \times 7 = 28$ $\frac{28}{4} = 7$

1

(c) Solve $6(3x - 17) = 42$. [3]

$18x - 17 = 42$ $+17$

$+17$

$18x = 59$

$59 \div 18 = 3.2777$

$x = 3.3$

BC
B1
B1

(d) Solve the inequality $9x + 5 < 77$. [2]

(e) Write down the greatest whole number that satisfies the inequality $5x < 85$. [2]

5

Examiner only

2. *(a)* Solve $\frac{5x}{8} = 10$. [2]

$5 \times 8 = 40$

$5x = 40 \qquad x = 8$

(b) Solve $\frac{28}{x} = 7$. [1]

$28 \div 7 = 4$

$x = 4$

(c) Solve $6(3x - 17) = 42$. $18x - 102 = 42$. [3]

(d) Solve the inequality $9x + 5 < 77$. [2]

(e) Write down the greatest whole number that satisfies the inequality $5x < 85$. [2]

Examiner only

2. *(a)* Solve $\frac{5x}{8} = 10$. [2]

$5 \times 8 = 40$

$5x = 40 \qquad x = 8$

0

(b) Solve $\frac{28}{x} = 7$. [1]

$28 \div 7 = 4$

$x = 4$

1

(c) Solve $6(3x - 17) = 42$. $18x - 102 = 42$. ✓ [3]

B1

(d) Solve the inequality $9x + 5 < 77$. [2]

(e) Write down the greatest whole number that satisfies the inequality $5x < 85$. [2]

2

Examiner only

3. *(a)* What percentage is 34 of 6800? [2]

(b) Increase 34 000 by $2\frac{1}{4}$%. [2]

(c) Evaluate each of the following three lengths **correct to two significant figures**, and then arrange them in ascending order.
You must show all your working. [5]

0·26 of 1345 metres

$\frac{3}{8}$ of 600 metres

4·5% of 3600 metres

Smallest Largest

(d) Calculate the difference between

- the smaller share when 450 is shared in the ratio 4:5

and

- $\frac{4}{5}$ of 450. [5]

Examiner only

3. *(a)* What percentage is 34 of 6800? [2]

$6800 \times 0{\cdot}34 = 2312$

(b) Increase 34 000 by $2\frac{1}{4}$%. [2]

$1/4 = 0{\cdot}25$ $\quad 34000 \times 2{\cdot}25 = 76500$

(c) Evaluate each of the following three lengths **correct to two significant figures**, and then arrange them in ascending order.
You must show all your working. [5]

0·26 of 1345 metres

$\frac{3}{8}$ of 600 metres

4·5% of 3600 metres

$1345 \times 0{\cdot}26 = 349{\cdot}7 \Rightarrow 350$

$3/8 = 0{\cdot}375 = 600 \times 0{\cdot}375 = 225$

$4{\cdot}5\% = 0{\cdot}045 = 3600 \times 0{\cdot}045 = 162$

162 metres (Smallest) $\quad$ 225 metres $\quad$ 350 metres (Largest)

(d) Calculate the difference between

- the smaller share when 450 is shared in the ratio 4:5 $= 9$
- and
- $\frac{4}{5}$ of 450. $4/5 = 0{\cdot}8$ [5]

$450 \div 9 = 50 = 1$ share.

$50 \times 4 = 200$. 4 shares

$200 + 50 = 250$. 5 shares

$0{\cdot}8 \times 450 = 360$

Difference $= 360 - 200 = 160$.

Examiner only

3. *(a)* What percentage is 34 of 6800? [2]

$6800 \times 0{\cdot}34 = 2312$ M0 A0

(b) Increase 34 000 by $2\frac{1}{4}$%. [2]

$1/4 = 0{\cdot}25$ $34000 \times 2{\cdot}25 = 76500$ M0 A0

(c) Evaluate each of the following three lengths **correct to two significant figures**, and then arrange them in ascending order.
You must show all your working. [5]

0·26 of 1345 metres

$\frac{3}{8}$ of 600 metres

4·5% of 3600 metres

$1345 \times 0{\cdot}26 = 349{\cdot}7 \Rightarrow 350$ M1 A1

$3/8 = 0.375 = 600 \times 0{\cdot}375 = 225$ A1

$4{\cdot}5\% = 0{\cdot}045 = 3600 \times 0{\cdot}045 = 162$ A1

162 metres Smallest, 225 metres, 350 metres Largest B0

(d) Calculate the difference between

- the smaller share when 450 is shared in the ratio 4:5 = 9
- and
- $\frac{4}{5}$ of 450. $4/5 = 0{\cdot}8$

[5]

$450 \div 9 = 50 = 1$ share.

$50 \times 4 = 200$. 4 shares

$200 + 50 = 250$. 5 shares 5

$0{\cdot}8 \times 450 = 360$

Difference $= 360 - 200 = 160$. ✓ (9)

Examiner only

3. *(a)* What percentage is 34 of 6800? [2]

1% = 68 0.5%

0.5% = 34

(b) Increase 34 000 by $2\frac{1}{4}$%. [2]

2% of 34000 = 680 2¼% of 34000 = 765

¼% of 34000 = 85 34000 + 765 = 34765

(c) Evaluate each of the following three lengths **correct to two significant figures**, and then arrange them in ascending order.
You must show all your working. [5]

0·26 of 1345 metres

$\frac{3}{8}$ of 600 metres

4·5% of 3600 metres

3/8 1716

26% of 1345 = 349.7 1345 ÷ 100 × 26

3/8 of 600 = 225 600 ÷ 8 × 3

4.5% of 3600 = 162 3600 ÷ 100 × 4.5

4.5% of 3600 3/8 of 600 26% of 1345

Smallest Largest

(d) Calculate the difference between

- the ~~smaller share~~ when 450 is shared in the ratio 4:5

and

- $\frac{4}{5}$ of 450. [5]

9 shares = 450 ⅕ of 450 = 90

1 share = 50 4/5 of 450 = 360

4 shares = 200

4/5 is greater than the smaller share.

Examiner only

3. *(a)* What percentage is 34 of 6800? [2]

1% = 68 0.5%

0.5% = 34

2

(b) Increase 34 000 by $2\frac{1}{4}$%. [2]

2% of 34000 = 680 2¼% of 34000 = 765

¼% of 34000 = 85 34000 + 765 = 34765

2

(c) Evaluate each of the following three lengths **correct to two significant figures**, and then arrange them in ascending order.
You must show all your working. [5]

0·26 of 1345 metres

$\frac{3}{8}$ of 600 metres

4·5% of 3600 metres

26% of 1345 = 349.7 ✓ 1345 ÷ 100 × 26 M1

3/8 of 600 = 225 ✓ 600 ÷ 8 × 3 A1

4.5% of 3600 = 162 ✓ 3600 ÷ 100 × 4.5 A1

A1

4.5% of 3600 3/8 of 600 26% of 1345 B0

Smallest Largest

(d) Calculate the difference between

- the smaller share when 450 is shared in the ratio 4:5

and

- $\frac{4}{5}$ of 450. [5]

9 shares = 450 1/5 of 450 = 90 M1

1 share = 50 4/5 of 450 = 360 ✓ A1

4 shares = 200 ✓ M1

4/5 is greater than the smaller share. A1

A0

12

Turn over.

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