

Multiplication and Division Past Paper Questions (MS)



Q1.

Question	Answer	Mark	Mark scheme	Additional guidance									
	345	M1	<p>for complete method with relative place value correct including addition of all the appropriate elements of the calculation.</p> $\begin{array}{r} 230 \\ 115 \\ \hline 345 \end{array}$ $200 + 30 + 100 + 15 = 345$ <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>20</td> <td>3</td> </tr> <tr> <td>10</td> <td>200</td> <td>30</td> </tr> <tr> <td>5</td> <td>100</td> <td>15</td> </tr> </table> <p>$23 + 23 + 23 + 23 + 23 = 115$; $115 + 115 + 115 = 345$</p> <p>A1 cao</p>		20	3	10	200	30	5	100	15	<p>Accept all equivalent methods if complete.</p> <p>Partitioning methods may show a complete method which has been broken down into multiple stages.</p> <p>Multiple addition of 23 (or 15) acceptable if the correct number added is shown, and an attempt at addition is clear.</p>
	20	3											
10	200	30											
5	100	15											

Q2.

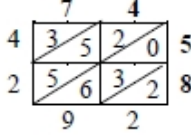
Question	Working	Answer	Mark	Notes												
	$\begin{array}{r} 342 \\ \times 24 \\ \hline 6840 \\ 1368 \\ \hline 8208 \end{array}$ <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>300</td> <td>40</td> <td>2</td> <td></td> </tr> <tr> <td>6000</td> <td>800</td> <td>40</td> <td>20</td> </tr> <tr> <td>1200</td> <td>160</td> <td>8</td> <td>4</td> </tr> </table> <p>$6000 + 800 + 40 + 1200 + 160 + 8 = 8208$</p>	300	40	2		6000	800	40	20	1200	160	8	4	8208	3	<p>M1 for a complete method with relative place value correct. Condone 1 multiplication error, addition not necessary. M1 (dep) for addition of all the appropriate elements of the calculation. A1 cao</p> <p>M1 for a complete grid with not more than 1 multiplication error, addition not necessary (inside numbers) M1 (dep) for addition of all the appropriate elements of the calculation (eg outside numbers) A1 cao</p> <p>M1 for sight of a complete partitioning method, condone 1 multiplication error, addition not necessary. M1 (dep) for addition of all the appropriate elements of the calculation. A1 cao</p>
300	40	2														
6000	800	40	20													
1200	160	8	4													



Q3.

Question	Answer	Mark	Mark scheme	Additional guidance
	14	M1	for $42 \div 3$	
		A1	cao	

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance									
	4292	M1	for complete method with relative place value correct including addition of all the appropriate elements of the calculation	Working $\begin{array}{r} 592 \\ 3700 \\ \hline 4292 \end{array}$  <table border="1"> <tr> <td></td> <td>70</td> <td>4</td> </tr> <tr> <td>50</td> <td>3500</td> <td>200</td> </tr> <tr> <td>8</td> <td>560</td> <td>32</td> </tr> </table> $3500 + 560 + 200 + 32 = 4292$		70	4	50	3500	200	8	560	32
	70	4											
50	3500	200											
8	560	32											
		A1	cao										

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	3	P1	for a start to the process eg $240 - (2 \times 45) (= 150)$ oe or $(2 \times 45) + 40 (= 130)$ oe	
		P1	for complete process eg " $150 \div 40 (= 3.75)$ " – can be implied by $40 + 40 + 40 = 120$ or " $130 \div 40 (= 3.25)$ "	Considering just one piece of 45 cm is not a misread but $(240 - 45) \div 40 (= 4.875)$ oe should be awarded P1 only
		A1	cao	

Q6.



Question	Answer	Mark	Mark scheme	Additional guidance
	19.85	P1	for a start to the process eg $30 \div 6 (=5)$ or $30 \div 15 (=2)$ or $30 \div 10 (=3)$ OR $30 \times 37 (=1110)$ OR $82 \div 6 (=13.6 \text{ to } 13.7)$ or $45 \div 15 (=3)$ or $1.25 \div 10 (=0.125)$	
		P1	for process to find cost of 30 pens or 30 pencils or 30 rulers eg “5” $\times 82 (= 410)$ or “2” $\times 45 (= 90)$ or “3” $\times 1.25 (= 3.75)$ OR “13.6.” $\times 30 (=409.8 \text{ to } 410)$ or “3” $\times 30 (=90)$ or “0.125” $\times 30 (=3.75)$	Work may be in pence or in pounds
		P1	for a process to find cost of 2 of 30 pens or 30 pencils or 30 rulers eg any 2 of “5” $\times 82 (= 410)$, “2” $\times 45 (= 90)$, “3” $\times 1.25 (= 3.75)$	Intention to add not necessary eg 410, 3.75 is sufficient, or working leading to these figures Any two correct methods will imply P1P1P1
		P1	for adding at least 3 different costs (units may not be consistent) eg “410” + “90” + “3.75” or “410” + “90” + “11.10”	Correct working for 3 of pens, pencils, rulers and pencil cases with an intention to add, may be in a mixture of money units
		A1	cao	

Q7.

Question	Working	Answer	Mark	Notes
		Shown	M1	for method started to find comparable amounts, eg $17 \times 46 (=782)$ or $17 \times 0.46 (=7.82)$ or $17 \times 35 (=595)$ or $266 \div 35 (=7.6)$ or $26600 \div 35 (=760)$
			M1	for complete method to find comparable figures eg $17 \times 46 (=782)$ or $17 \times 0.46 (=7.82)$ AND $266 \div 35 (=7.6)$ or $26600 \div 35 (=760)$ eg $17 \times 46 \times 35 (=27370)$ or $17 \times 0.46 \times 35 (=273.7)$
			C1	Shows correct comparable figures eg 7.82 and 7.6(0), 782 and 760 OR 273.7(0)

Q8.



	Working	Answer	Mark	Notes
		8.32 8 51.22	3	B1 cao B1 cao B1 ft from '8.32'

Q9.

Question	Working	Answer	Mark	Notes
	$(1 \times 18 + 12 + 2 \times 18)$ $+$ $(10 + 15 + 1 \times 18 + 5)$ $= 66 + 48$ $= 114$ OR $12 + 10 + 15 + 5 =$ 42 $1 + 2 + 1 = 4$ $4 \times 18 = 72$ $42 + 72$	Yes they have raised enough money	5	M1 for $1 \times 18 + 12 + 2 \times 18 (=66)$ or Jamie's form completed with correct 18 and 36 and a final total. M1 for $10 + 15 + 1 \times 18 + 5 (=48)$ or Lily's form completed with correct 18 and a final total. M1 "66" + "48" (dep on M1) A1 for 114 C1 (dep on M1) for clear comparison and conclusion using their answer for the total raised OR M1 for $12 + 10 + 15 + 5 (=42)$ seen separately from any other total M1 for $(1 + 2 + 1) \times 18$ or 72 M1 for "42" + "72" (dep on 2nd M1) A1 for 114 C1 (dep on M1) for clear comparison and conclusion using their answer for the total raised.

Q10.

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Question	Working	Answer	Mark	Notes
*		Quick Mix from correct working	4	M1 for $13.50 + 4 \times 6.90 (= 41.1)$ M1 for $7.20 \times (4 + 1) + 5.90 (= 41.9)$ A1 for 41.1(0) and 41.9(0) if working seen C1 ft (dep on M1) for a statement of Quick Mix with amounts clearly associated with correct companies

Q11.



Question	Answer	Mark	Mark scheme	Additional guidance
	19	P1	for $4275 \div 28 (= 152.678..)$ or 153 or a build up to at least $150 \times 28 (=4200)$	Division may be seen as a build up method
		P1	for “152” $\times 28 (= 4256)$ or “153” $\times 28 (=4284)$ or (“152.678..” – 152) ($=0.678..$) or $4275 \div$ “152” – 28($= 0.125$) or $4275 -$ “4200” ($=75$) oe	Use of 150×28 or better for “4200”
		A1	cao	

Q12.

Question	Working	Answer	Mark	Notes
		2.676	M1	for method to find total weight of at least 4 items, e.g. $2 \times 120 + 2 \times 524 + 474 + 86 + 214 + 339 + 275$
			B1	for change in units, e.g. $2676 \div 1000$
			A1	cao

Q13.

Question	Working	Answer	Mark	Notes
		Identifies error in method	C1	Explanation of error eg she should have multiplied 348 by 2 not divided