

Q1 June 2017

14	(a)	\$	£	2975.79	P1	for process to find total room cost eg $196 \times 14 (= 2744)$
		5	2.631...		P1	for process to find total wifi cost eg $5 \times 12 (= 60)$
		60	31.578...		P1	for using exchange rate appropriately (could be used earlier in the question), eg " $2804 \div 1.90 (= (£)1475.789...)$ " or $1500 \times 1.90 (= (\$)2850)$
		196	103.157...		P1	for process to find the total cost in £, eg " $1475.79(...)$ " + 1500
		2744	1444.21...		A1	or in \$, eg " 2850 " + " 2804 " (= 5654)
		2804	1475.789...			2975 to 2976
	(b)			Statement	C1	Statement about the total price rising May comment that flights will not change but the rest will rise

Q2 June 2017

20			1.01	P1	fruit syrup $15 \times 1.4 (= 21)$ or water $280 \times 0.99 (= 277.2)$ or apple juice $25 \times 1.05 (= 26.25)$
				P1	(dep P1) for complete process to find the total mass e.g. " 277.2 " + " 26.25 " + " 21 " (= 324.45) or a weighted density eg $15 \times 1.4 \div 320 (= 0.065625)$ or $280 \times 0.99 \div 320 (= 0.86625)$ or $25 \times 1.05 \div 320 (= 0.08203125)$
				P1	(dep P2) for complete process to find the density eg " $324.45 \div 320 (= 1.01...)$ " or " 0.065625 " + " 0.86625 " + " 0.08203125 " (= 1.0139...)
				A1	1.01 to 1.014

Q3 June 2019

22		79.76	P1	process to find number of gallons eg $560 \div 34.5 (= 16.23...)$ OR finding the miles per litre eg $34.5 \div 4.55 (= 7.582...)$	For P marks allow use of truncated/rounded values
			P1	process to convert from gallons to litres eg " 16.23 " $\times 4.55 (= 73.855...)$ OR to work out the cost per gallon eg $4.55 \times 1.08 (= 4.914)$ OR finding the number of litres eg $560 \div "7.582..." (= 73.859...)$	
			P1	(dep P2) for a complete process to work out the cost using the operations $(560 \div 34.5) \times 4.55 \times 1.08$ eg " $73.855...$ " $\times 1.08 (= 79.763...)$ or " 4.914 " $\times "16.23..." (= 79.763...)$ or " $73.859...$ " $\times 1.08 (= 79.763...)$	
			A1	for 79.69 to 79.79	

Q4 June 2023

27		648	M1	for substitution into density formula eg 9×72 or $9 = \frac{m}{72}$
			A1	cao

Q5 June 2024

26		2	P1	for process to find volume of tin eg $600 \div 0.6 (= 1000)$	Award P1 for $600 \div 0.6 (= 1000)$ even if not used
			P1	for process to find volume of salt eg " 1000 " - 700 (= 300)	
			P1	for a process to find density of the salt eg $600 \div "300"$ or $0.6 \times ("1000" \div "300")$ or $600 \div [\text{volume}]$	
			A1	cao	

[volume] can be 700 or from a seen calculation using "1000", "300", 700 or identified as volume by label or formula or units

A correct answer with no supportive working gets 0 marks

Q6 Nov 2017

20		New York (supported)	P1	for changing between £ and \$, eg $1.089 \times 1.46 (= 1.58(9.))$ or $2.83 \div 1.46 (= 1.93(8.))$ or between litres and gallons, eg $1.089 \times 3.785 (= 4.12(1.))$ or $2.83 \div 3.785 (= 0.74(7.))$
			P1	for a complete process to give values that can be used for comparison, eg " $1.938... \div 3.785 (= 0.51(2.))$ " or " $1.589... \times 3.785 (= 6.01(7.))$ " or $1.089 \times 3.785 (= 4.12(1.))$ and $2.83 \div 1.46 (= 1.93(8.))$
			C1	for New York and correct comparative values.

Q7 Nov 2017

21		648	M2	a complete method, eg $12.5 \times 1000 \div 19.3$
			[M1	for using volume = mass/density, eg $12500 \div 19.3$ (condone inconsistent units or incorrect conversions) may be implied by digits 647... or 648...]
			A1	for answer in range 647 to 648

Q8 Nov 2021

24	260	P1	conversion to common units of capacity eg $2.2 \times 4.54 (= 9.988)$ or $8 \div 4.54 (= 1.76...)$ OR for company A $2400 \div 4.54 (= 528.63...)$ OR $2400 \div 8 (= 300)$ OR a rate per minute $8 \div [\text{time for Company A}] (= 4.8...)$ oe	[time for Company A] could be 1 min 40 sec or 1.66... or 1.6 or 1.40 etc as long as it is clear it relates to 1 min 40 sec Results of calculations may be truncated or rounded.
		P1	for a complete process to find the time for one water rate in minutes. eg in litres Company A $2400 \div "4.8..." (= 500)$ or $"300" \times [1 \text{ min } 40 \text{ sec}] (= 500)$ or Company B $2400 \div "9.988" (= 240.28...)$ OR eg in gallons Company A $"528.63..." \div ("1.76..." \div [1 \text{ min } 40 \text{ sec}]) (= 500)$ or Company B $"528.63..." \div 2.2 (= 240.28...)$	
		P1	for complete processes to find the times for both company A and company B in minutes. Company A eg in litres $2400 \div "4.8..." (= 500)$ or $"300" \times [1 \text{ min } 40 \text{ sec}] (= 500)$ or in gallons $"528.63..." \div ("1.76..." \div [1 \text{ min } 40 \text{ sec}]) (= 500)$ AND Company B eg in litres $2400 \div "9.988" (= 240.28...)$ or in gallons $"528.63..." \div 2.2 (= 240.28...)$	
		A1	for an answer in the range 259 to 260	If the answer is given within the range but then rounded incorrectly award full marks.

Q9 Nov 2023

17	No (supported)		Working per week	Working per hour	Throughout units and trailing 0s need not be given. Accept rounded or truncated figures throughout unless ambiguous.
		M1	for $26.4 \times 32 (= \$844.80)$	for $473.28 \div 32 (= £14.79)$	
		M1	for " $844.8" \div 1.796 (= £470.37...)$ or for $473.28 \times 1.796 (= \$850....)$	for " $14.79" \times 1.796 (= \$26.56....)$ or for $26.4 \div 1.796 (= £14.699...)$	
		C1	for No and correct figures (850... and 844.8) or 470.37...	for No and correct figures (14.79... and 14.699..) or 26.56...	"No" may be expressed in words eg "Australia pay is less"

Q10 Nov 2023

27	Shown	M1 for substitution to find area of face, eg $3.5 = \frac{504}{\text{area}}$ or $3.5 \times \text{area} = 504$ or $\text{area} = 504 \div 3.5 (= 144)$ or for working from surface area eg $900 \div 6 (= 150)$ M1 for method to find comparable figures, eg $"144" \times 6 (= 864)$ or $"150" \times 3.5 (= 525)$ or $504 \div "150" (= 3.36\dots)$ or $504 \div 3.5 (= 144)$ and $900 \div 6 (= 150)$ or $900 \div 144 (= 6.25)$ and 6 C1 for correct comparable figures, eg 864 (and 900) or 144 and 150 or 525 (and 504) or 3.36... (and 3.5) or 6.25 and 6	Other equivalent methods should be credited accordingly Condone incorrect units given.
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