

Powerpoint Decimal Mark Scheme

French Advert (June 18)

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R3	Process to convert between currencies or work with 5 adverts	1 or	P	$195 \div 1.1025 (= 176.87..)$ OR $195 \times 5 (=975)$
	A4	Full process to find total amount	2 or	PQ	'176.87' $\times 5 (=884.35..)$ OR '975' $\div 1.1025 (=884.35..)$
	I6	Accurate figure	3	PQR	(£) [884 , 885] Must not come from incorrect working
Total marks for question			3		

Olive Oil (Oct 17)

(b)	R2	Process to find number of bottles needed.	1 or	N	e.g. $'2500' \div 750 (=3.3)$ OR $'2500' \div 500 (=5)$ OR $'2500' \div 250 (=10)$ Allow adding on to get 2.5 litres or subtracting from 2.5 litres Allow working out a cost of comparable quantities of oil to find the best value e.g. cost of 1 ml in each bottle
	A4	Process to find total cost of bottles totalling 2.5 litres	2 or	NP	e.g. $2 \times 3.59 + 2 \times 2.46 (=12.1)$ OR $3 \times 3.59 + (1 \times) 1.36 (=12.13)$ OR $2 \times 3.59 + (1 \times) 2.46 + 2 \times 1.36 (=12.36)$ OR $5 \times 2.46 (= 12.3)$ OR $10 \times 1.36 (=13.6)$ Other combinations are possible

Baggage Oct 15

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R2	Finds total allowed weight or excess he can afford	1 or	J	$23 \times 4 (=92)$ OR $10\ 000 \div 1800 (=5.5\dots)$
	I6	Finds excess weight or total weight he can afford to carry	2 or	JK	$97.4 - '92' (=5.4)$ OR $23 \times 4 (=92)$ and $10\ 000 \div 1800 (=5.5\dots)$
	A4	Full process to find figures to compare	3	JKL	'5' $\times 1800(=9000)$ OR '5.4' $\times 1800(=9720)$ OR (Their '5' must be a whole number from correctly rounded down answer in previous mark) OR $97.4 - '92' (=5.4)$ and $10\ 000 \div 1800 (=5.5\dots)$
	I7	Correct answer with accurate figures	1	M	Yes and 9000 (loyalty points) or 9720 (loyalty points) OR Yes and 5.4 and 5.5...(kg)
Total marks for question			4		

Birthday Party June 16

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R2	Begins the process to find total cost or cost per child	1 or	A	$3 \times 30(=90)$ OR $6.80 \times 12(=81.6)$ OR $2.29 \div 6(=0.381\dots)$ OR $400 \div 12(=33.33\dots)$ OR $150 \div 12(=12.5)$ Allow $2.29 \times 12(=27.48)$
	A4	Develops solution	2 or	AB	$2.29 \times 12 \div 6(=4.58)$ OR $(3 \times 30) \div 12(=7.5)$ OR Adds at least 3 costs together OR Subtracts at least 3 costs from (£)400 or from (£)33.33.. Allow use of '27.48'
	I6	Full process to find the total cost at village hall or cost per child	3	ABC	'90' + 150 + '81.6' + '4.58' (=326.18) OR '7.5' + '12.5' + 6.8 + '0.381..' (=27.181..) OR $400 - '90' - 150 - '81.6' - '4.58'(=73.82)$ OR '33.33..' - '7.5' - '12.5' - 6.8 - '0.381..' (=6.15..) OR Allow use of '27.48' (leads to (£)349.08)
	R3	Process to find total of lunch at princess party or cost per child	1 or	D	$4.49 \times 12(=53.88)$ OR $299 \div 12(=24.91\dots)$ Allow $299 \div 15(=9.93) \times 12(=239.04)$
	I6	Full process to find total cost or cost per child at princess party	2	DE	'53.88' + 299 (=352.88) OR '24.91' + 4.49 (=29.4066..) OR $400 - '53.88' - 299(=47.12)$ OR '33.33..' - 4.49 - '24.91..' (=3.92..) OR Allow '53.88' + '239.04' (=292.92)
	A5	Decision with accurate figures and valid reason	1	F	e.g. Village hall is cheapest AND (£)326(.18) and (£)352(.88) OR Princess party is less work and within budget (£) 27(.181..) and (£) 29(.40..) and (£)33.33(..)
Total marks for question			6		

Bicycle Park May 17

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R1	Process to work with dimensions	1 or	H	$18 \div 2 (=9)$ or $4.8 \div 0.6 (=8)$ or $18 \div 0.6 (=30)$ or $4.8 \div 2 (=2.4)$ OR $0.6 \times 2 (=1.2 \text{ m}^2)$ or $18 \times 4.8 (=86.4)$ May be seen on a diagram
	A4	Process to find number of bicycles	2 or	HJ	'9' \times '8' (=72) or '30' \times '2' (=60) or '30' \times '2.4' (=72) OR '86.4' \div '1.2' (=72) OR '1.2' \times 90 (=108) and $18 \times 4.8 (=86.4)$ OR Full arrangement seen on a diagram
	I7	Correct conclusion with accurate figure	3	HJK	No AND 72 (bicycles) OR No AND 108 (m ²) and 86.4 (m ²)
	A5	Valid check	1	L	Valid check E.g. one reverse process or alternative method
Total marks for question			4		

Exam Qs Additional Booklet

Q1.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R1	Process to work with gap	1	N	e.g. $32 - 3 (=29)$ or $'201' - 3 (=198)$
	A4	Process to find perimeter or total length of fencing or finds the number or length of rolls required	1 or	P	$68.5 + 32 + 68.5 + '29' (=198)$ OR $4 \times 50 (=200)$ OR $200 - 68.5 - 68.5 - 32 - '29' (=2)$ OR $68.5 + 32 + 68.5 + 32 (=201)$ OR $(68.5 + 32 + 68.5 + '29') \div 4 (=49.5)$ OR '198' \div 50(=3.96)
	I6	Correct decision with accurate figures	2	PQ	Yes AND 198(m) and 200(m) OR Yes AND 2(m left) OR Yes AND 49.5(m) OR Yes AND 3.9(6) (rolls)
	A5	Valid check	1	R	Valid check, e.g. approximation, alternative method or reverse process
Total marks for question			4		

Q2.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R2	Starts to work with Grillo payments	1 or	M	$24 \times 249.99 (=5999.76)$
	A4	Works with Grillo payments and delivery	2	MN	$'5999.76' + 180 (=6179.76)$
	R3	Starts to work with Oven World payments	1 or	P	$18 \times 185.99 (=3347.82)$ OR $2498.99 + 120 (=2618.99)$
	A4	Works with Oven World payments and delivery	2 or	PQ	$'3347.82' + 2498.99 + 120 (=5966.81)$ OR $'2618.99' + 18 \times 185.99 (=5966.81)$
	I6	Valid decision with accurate figures	3	PQR	Oven World AND (£)6179.76 and (£)5966.81 NB Allow comparison of truncated or rounded figures as long as supported by accurate working NB If 250 and 2499/2500 and 186 are used throughout all marks can be awarded
Total marks for question is				5	

Q3.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(a)	R2	Starts process to work with instructions	1 or	H	$2.75 + 1.25 + 1.95 + 2.25 + 1 + 1.45 (=10.65)$ OR $140 \div 80 (=1.75)$
	A4	Continues to work with instructions	2 or	HJ	$'10.65' \div 6 (=1.775)$ OR $'1.75' \times 6 (=10.5)$ OR $'10.65' \times 80 (=852)$ OR $140 \times 6 (=840)$
	R3	Completes process to work with instructions	3	HJK	$'1.775' \times 80 (=142)$ OR $2.75 + 1.25 + 1.95 + 2.25 + 1 + 1.45 (=10.65)$ and $'1.75' \times 6 (=10.5)$ OR $'10.65' \div 6 (=1.775)$ and $140 \div 80 (=1.75)$ OR $'10.65' \times 80 (=852)$ and $140 \times 6 (=840)$
	I6	Correct decision with accurate figures	1	L	Yes and (£)[141.6, 142.4] OR Yes and (£)10.5 and (£)10.65 OR Yes and (£)[1.77, 1.78] and (£)1.75 OR Yes and (£) 852 and (£) 840

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(b)	R2	Starts process to find amount	1 or	M	400 + 100 + 250 + 50 (=800) OR 600 ÷ 4 (=150) OR 400 ÷ 5 (=80) OR 100 ÷ 5 (=20) OR 250 ÷ 5 (=50) OR 50 ÷ 5 (=10)
	A4	Continues process	2 or	MN	'800' ÷ 5 (=160) OR '150' × 5 (=750) OR '80' × 4 (=320) oe OR '20' × 4 (=80) oe OR '50' × 4 (=200) oe OR '10' × 4 (=40) oe OR '80' + '20' + '50' + '10' (=160)
	A4	Completes process	3	MNP	'160' × 4 (=640) oe OR '150' × 5 (=750) and 400 + 100 + 250 + 50 (=800) OR '80' + '20' + '50' + '10' (=160) and 600 ÷ 4 (=150)
	I6	Correct decision with accurate figures	1	Q	No and (£)640 OR No and (£)750 and (£)800 OR No and (£)160 and (£)150
Total marks for question			8		

Q4.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(a)	I6	Engages with train times or relevant time periods	1 or	K	Selects any train to Naples departing after 09:25 AND any train to Rome departing at least 5.5 hours after arrival in Naples or arriving before 19.35 (trains can be identified by ticket prices) OR Identifies two of: 09.25 as earliest departure 5.5 hours the total time in Naples 19.35 as latest arrival time in Rome OR Selects 10.10 train to Naples OR Selects 17.55 train to Rome
	R2	Full process to find time constraints	2 or	KL	shows full build up method but disregards ticket prices e.g. 9.00, 9.25, 9.28, 11.32, 15.32, 17.02, 17.10, 18.20, 18.45 (allow some missing/combined stages) OR Selects 10:10 train and 11:20 + 5.5 hrs = 16:50 OR Selects 17:55 train and 17:55 – 5.5 hrs = 12:25 OR e.g. selects 10:10 train and `selects 18:30 train (omits 25 min walk to hotel)
	I6	Correct answer	3	KLM	Selects 10:10 train to Naples and 17:55 train to Rome No incorrect working should be seen

Q5.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R2	Begins the process to find total cost or cost per child	1 or	A	$3 \times 30 (=90)$ OR $6.80 \times 12 (=81.6)$ OR $2.29 \div 6 (=0.381..)$ OR $400 \div 12 (=33.33..)$ OR $150 \div 12 (=12.5)$ Allow $2.29 \times 12 (=27.48)$
	A4	Develops solution	2 or	AB	$2.29 \times 12 \div 6 (=4.58)$ OR $(3 \times 30) \div 12 (=7.5)$ OR Adds at least 3 costs together OR Subtracts at least 3 costs from (£)400 or from (£)33.33.. Allow use of '27.48'
	I6	Full process to find the total cost at village hall or cost per child	3	ABC	'90' + 150 + '81.6' + '4.58' (=326.18) OR '7.5' + '12.5' + 6.8 + '0.381..' (=27.181..) OR $400 - '90' - 150 - '81.6' - '4.58' (=73.82)$ OR '33.33..' - '7.5' - '12.5' - 6.8 - '0.381..' (=6.15.. Allow use of '27.48' (leads to (£)349.08)
	R3	Process to find total of lunch at princess party or cost per child	1 or	D	$4.49 \times 12 (=53.88)$ OR $299 \div 12 (=24.91..)$ Allow $299 \div 15 (=9.93) \times 12 (=239.04)$
	I6	Full process to find total cost or cost per child at princess party	2	DE	'53.88' + 299 (=352.88) OR '24.91' + 4.49 (=29.4066..) OR $400 - '53.88' - 299 (=47.12)$ OR '33.33..' - 4.49 - '24.91..' (=3.92.. Allow '53.88' + '239.04' (=292.92)
	A5	Decision with accurate figures and valid reason	1	F	e.g. Village hall is cheapest AND (£)326(18) and (£)352(88) OR Princess party is less work and within budget (£) 27(181..) and (£) 29(40..) and (£)33.33(..)
Total marks for question			6		

Q6.

b	R1	Process to find total length of ribbon or number of pieces per roll	1 or	L	$8 \times 20 (= 160)$ OR $8 \times 30 (=240)$ OR $8 \times 20 \times 30 (=4800)$ OR '0.3' \div 25 (=0.012) OR '2500' \div 30(=83.3..) OR $25 \div 0.3(=83.3..)$ build up methods may be seen
	A4	Full process to find number of rolls	2 or	LM	'0.012' \times 8 \times 20 (=1.92) OR '160' \times '0.3' (=48) OR '160' \times '0.3' \div 25 (=1.92) OR '240' \times 20 \div 100 (=48) OR '4800' \div '2500' (=1.92) OR $20 \times 8 \div '83' (=1.927...)$ OR 20×8 and '83' (=2) from 83.3 rounded
	I6	Uses consistent units to find correct number of rolls	3	LMN	2 (rolls) and 1.92 or 48 or 1.927... OR 2 (rolls) and 4800 and 5000
Total marks for question			7		

Q7.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(a)	R3	Works with consistent units	1	A	Uses 0.75(m) in calculation OR 420, 240, 650 and 450 (cm)
	A4	Process to substitute into formulae or works backwards from liner dimensions to find any pond dimension	1 or	B	$2 \times '0.75' + 4.2 (=5.7)$ and $2 \times '0.75' + 2.4 (=3.9)$ OR $2 \times 75 + '420' (=570)$ and $2 \times 75 + '240' (=390)$ (units may not be consistent) OR E.g. $(5 - 4.2) \div 2 (=0.4)$ oe and $(5 - 2.4) \div 2 (=1.3)$ OR $(5.5 - 4.2) \div 2 (=0.65)$ oe and $(4 - 2.4) \div 2 (=0.8)$ OR $(6.5 - 4.2) \div 2 (=1.15)$ oe and $(4.5 - 2.4) \div 2 (=1.05)$
	I7	Correct decision and accurate figures in consistent units	2	BC	C and 5.7 (m) oe and 3.9 (m) oe OR C and 0.75 (m) oe and 1.15 (m) oe and 1.05 (m) oe
(b)	R1	Process to work with discount	1 or	D	$240.99 \div 5 (=48.198)$ oe OR Full process to reduce price of any item(s) by $\frac{1}{5}$
	A4	Complete calculation to find cost after discount	2 or	DE	$(240.99 - '48.198') + 74.98 + 79.99 + (2 \times 18.98)$ (= 385.722) Allow one error or omission of full price items
	I6	Correct answer from accurate figures in correct money notation	3	DEF	£385.72 or £385.73 (in correct money notation)
	A5	Valid check of their calculation	1	G	Reverse or alternative method or estimation for any of their calculations
Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(c)	R2	Process to work with conversion	1 or	H	$5900 \div 4.5 (=1311.1.. \text{ gallons})$ OR $10 \times 4.5 (=45 \text{ litres})$ OR $2 \times 60 (=120)$
	R3	Process to work with rate of flow or capacity	2 or	HJ	'1311.1..' $\div 10 (=131.11.. \text{ mins})$ OR $5900 \div '45' (=131.11.. \text{ mins})$ OR '120' $\times 10 (=1200 \text{ gallons})$
	A4	Process to find figures to compare	3 or	HJK	'1311.1..' $\div 10 (=131.11.. \text{ mins})$ and $2 \times 60 (=120 \text{ mins})$ OR '131.11..' $\div 60 (=2.185.. \text{ hrs})$ OR 2 hours 11(1..) minutes OR '1200' $\times 4.5 (=5400)$ OR '120' $\times 10 (=1200 \text{ gallons})$ and $5900 \div 4.5 (=1311.1.. \text{ gallons})$
	I7	Conclusion and accurate figures	4	HJKL	E.g. Yes/No and [131, 131.11..] (mins) and 120 (mins) OR Yes/No and only 11 mins more (than 2 hours) OR Yes/No and 2.1(85..) (hours) OR No and 5400 (litres) OR No and 1200 (gallons) and 1311.1.. (gallons)
Total marks for question			11		

Q8.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
a	R2	Begins to process given information	1 or	A	14 00 – 4 hours (= 10 00) OR Adds 4 hours to any London departure time OR Method to work out arrival time in Tenerife of any flight OR 06 45 or 07 35 or A101 or A102 OR 16 25 or 18 10 or 18 30 or 19 35 or 21 50 or B203 or B204 or B205 or B206 or B207 OR Flight out and flight back from/to same London airport
	I7	Appropriate pair of flights	2	AB	06 45 or A101 and 16 25 or B203 OR 07 35 or A102 and 18 30 or B205 OR 07 35 or A102 and 21 50 or B207 If more than one solution offered - must be correctly paired
b	R3	Changes to consistent currencies	1 or	C	960 ÷ 1.17 (=820.51...) OR 850 × 1.17 (=994.5) OR 25 × 1.17 (=29.25)
	A4	Finds total price	2 or	CD	'820.51...' + 25 (=845.51..) OR (960 + '29.25') ÷ 1.17 (=845.51..) OR '994.5' - '29.25' (=965.25) OR (850 - 25) × 1.17 (=965.25) OR 960 + '29.25' (=989.25) and 850 × 1.17 (=994.5)
	I6	Accurate figures	3	CDE	(£)845.51(28...) or (£)845.52 OR (€)965.25 OR (€)989.25 and (€)994.5(0) OR (£)4.49 or (€)5.25 (left over) NB: Allow functionally and correct rounded solutions
	I7	Decision ft from their figures	1	F	Decision ft from their figures provided at least CD scored
Total marks for question			6		

Q9.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(a)	R2	Process to work with percentages	1 or	A	24 ÷ 100 × 135 (=32.4) oe OR 8 ÷ 100 × 135 (= 10.8) oe OR 8 ÷ 100 × (135 + 25) (= 12.8)
	A4	Process to find figures to compare	2 or	AB	24 ÷ 100 × 135 (=32.4) oe and 8 ÷ 100 × 135 (=10.8) oe OR 25 + '10.8' (= 35.8) OR '32.4' - '10.8' (=21.6) OR (24 - 8) ÷ 100 × 135 (=21.6) oe
	I7	Correct decision from correct figures	3	ABC	Yes AND (£)35.8(0) AND (£)32.4(0) OR Yes AND (£)3.4(0) (difference) OR Yes AND (£)21.6(0) (compared with £25) OR Yes AND (£)170.8(0) AND (£)167.4(0)

(b)	R2	Adds 2 fractions or 2 decimal fractions correctly	1 or	D	E.g. $8\frac{1}{2} + 3\frac{1}{2} = 12$ OR $2.66 + 5.33 = 7.99$
	I6	Finds correct total distance for a complete route	2	DE	E.g. H, M, J, F, K, H and 25.25(miles) oe OR H, K, M, J, F, H AND 29 (miles) OR H, M, K, F, J, F, H AND $28\frac{11}{12}$ (miles) OR H, F, K, M, J, F, H AND $31\frac{5}{6}$ (miles)
	A5	Writes a comment to evaluate route	1	F	E.g. My route visits each agent only once I think my route is shortest. I do not have to backtrack on my route My route visits all of the agents but may not be shortest.
Total marks for question			6		

Q10.

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
(a)	R2	Process to convert kg to pounds or to find cooking time per kg	1 or	L	$3.5 \times 2.2 (=7.7)$ OR $25 \times 2.2(=55)$
	A4	Full process to find total cooking time	2 or	LM	'7.7' $\times 25 + 20(=212.5)$ OR '55' $\times 3.5 + 20(=212.5)$ Allow 8 for '7.7'
	I6	Accurate answer with correct units	3	LMN	[212, 213] min(utes) NB isw OR 3 h(ours) and 32 min(utes) OR 3 h(ours) and 33 min(utes) OR 3 h(ours) and 30 min(utes) oe supported by calculations
(b)	R1	Works with dimensions or volumes	1	P	$33 \div 6.5 (=5.07\dots)$ oe OR $36 \div 18 (=2)$ oe OR $70 \div 22 (=3.18\dots)$ oe OR $36 \div 22 (=1.63\dots)$ oe OR $70 \div 18 (=3.8\dots)$ oe OR 2 of: 5, 2 or 3 indicated on diagram OR 5, 1 and 3 indicated on diagram OR $33 \times 36 \times 70 (=83160)$ OR $6.5 \times 18 \times 22 (=2574)$ OR Finds 3 factors of 24 e.g. 4 and 2 and 3 or 2 and 2 and 6
	A4	Full process to find the total number of boxes that can be placed correctly into the crate.	2	PQ	'5' \times '2' \times '3' (=30) OR '5' \times '1' \times '3' (=15) OR Tests factors of 24 against all dimensions (may be seen on the diagram)
	I7	Correct conclusion with accurate figures	3	PQR	No and 30 (boxes) or No and $5 \times 2 \times 3 \neq 24$ oe
Total marks for question			6		