

**Level 1 Onscreen Functional Skills Mathematics**

**Sample Assessment Material**

**Mark Scheme**

**November 2010**

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q1	O	R1	C11	Key is set	1	Completes suitable key or uses consistent value
	C	A1	C11	Interprets own symbolism correctly	1 or	Any month correct according to choice of key
	C	A1	C12	Interprets own symbolism correctly	2	All three months correct according to choice of key
				<b>Total marks</b>	<b>2</b>	
Q2	O	R2	C7	Method to add numbers to find total time  OR attempt to work backwards from 6 pm	1 or	20 + 40 + 5 + 80 + 65 seen (=210)  OR Attempt at successive subtraction seen or implied, eg 6, 4:55, 3:35, 3:30, 2:50, 2:30 at least 3 successive subtractions seen  Condone 1 error  Use of 24 hr or 12 hour clock
	C	A1	C8	shows a suitable process to convert to hours and minutes  or Complete correct method for working back from 6 pm	2	eg successive subtraction '210'-60 -60 etc or 3 in hours AB or 3x60 (=180) seen in WB or 3.5 or 3 hours 30 seen  or Attempt at successive subtraction seen or implied, eg 6, , 4:55, 3:35, 3:30, 2:50, 2:30 all 5 successive subtractions seen  Condone 1 error
	C	A1	C2	finds correct (ft) answer	1	2:30 in answer box
				<b>Total marks</b>	<b>3</b>	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q3	O	R1	C1	Chooses a method to approach the problem	1	Attempts table or uses calculation method Table includes indication of month, amount saved, amount spent or left, accept different methods of representation with systematic approach OR Finds total amount saved over year (=1200) OR converts monthly saving into driving lesson equivalent (=4)
	O	I	C1	Interprets their solution, accounting for requirements	1	Uses table to find amount left over for driving lessons (=450) OR finds amount left over for driving lessons ft from their working (=450) OR converts holiday and laptop into driving lesson equivalent (18, 12)
	O	I	C1	Interprets their solution	1	Ft from their total amount OR their driving lesson equivalents Finds number of driving lessons (=18)
				<b>Total marks</b>	<b>3</b>	
Q4	O	R2	C7	shows a suitable process to calculate saving	1	eg $2.98 \times 4$ (=11.92) OR $10 \div 4$ (= 2.50)
	C	A1	C2	calculates correct saving	1	'11.92' - 10 or 2.98-'2.50' (ft)
	C	A1	C4	Saving found	1	Saving found for either 1 plant or 4 plants (48p or £1.92)
				<b>Total marks</b>	<b>3</b>	
Q5a	C	I	C11	interprets line graph	1	states dollars as 60 or 60.00
Q5b	C	I	C11	interprets line graph	1	states pounds as 8 or 8.00
				<b>Total marks</b>	<b>2</b>	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q6	0	R3	C6	Selects maths in an organised way and begins to use formula correctly or begins to reverse check from 230	1 or	$7 \times 14 (=98)$ in working box OR 230-121 .....(=109)
	0	A2	C6	correct temperature in degrees C or correct gas mark if reverse calculation done	2	219 in working box OR 7.7857 OR 7.7 OR 7.8 if reverse calculation done
	0	I	C1	correct decision (ft their working)	1	eg no, the temperature should be 11 degrees higher OR no gas mark 7 is not high enough it needs to be gas mark 8
				<b>Total marks</b>	<b>3</b>	
Q7	0	A2	C7	Begins to check amounts from the bill OR begins to re-calculate the total	1 or	$2 \times 1.76 = (3.52)$ or $1.76+1.76 = (3.52)$ or $3.52/2=(1.76)$ shown OR $(4 \times 17( = 68)$ or $17+17+17+17=68$ OR $85/4 = (21.25)$ shown
	0	A2	C2	Completes check or finds correct total	2	21.25, OR 68, OR 420 seen
	0	I	C4	interprets correctly (ft their WB)	1	clicks correct button based on their working
				<b>Total marks</b>	<b>4</b>	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q8	0	I	C12	Considers constraints	1 or	Two of : all 13 people seated, family on one table, both couples correctly seated, at most 1 spare seat on any table
	0	I	C12	Interprets solution	2 or	Three of : all 13 people seated, family on one table, both couples correctly seated, at most 1 spare seat on any table
	0	R2	C12	Fully correct solution	3	All of : all 13 people seated, family on one table, both couples correctly seated, at most 1 spare seat on any table
				Total marks	3	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q9	O	R3	C4	Accept comparison in months if adjustments for one-off payments and B made  Calculates 1 package or approximates to consistent level of accuracy	1 or	One of 254.88, 177 or 216 OR Appropriate approximation for two values A: $15 + (12 \times 19.99)$ OR Approximation method 1: $15 + (20 \times 12) = 255$ Approximation method 2: $15 + (20 \times 10) = 215$ B: $27 + (12 \times 12.50)$ OR Approximation method 1: $27 + (13 \times 12) = 183$ Approximation methods 2: $30 + (10 \times 10) = 130$ C: $18 \times 12 = (216)$ OR Approximation method 2 : $20 \times 10 = 200$
	O	A1	C4	Calculates 2 packages or approximates to consistent level of accuracy	2	Two of 254.88, 177 or 216 OR Appropriate approximation for all values A: $15 + (12 \times 19.99)$ OR Approximation method 1: $15 + (20 \times 12) = 255$ Approximation method 2: $15 + (20 \times 10) = 215$ B: $27 + (12 \times 12.50)$ OR Approximation method 1: $27 + (13 \times 12) = 183$ Approximation methods 2: $30 + (10 \times 10) = 130$ C: $18 \times 12 = (216)$ OR Approximation method 2 : $20 \times 10 = 200$
	O	I	C7	Totals per year for all packages Compares three packages B: Cheapest implies comparison	1	Clicks correct package based on their working
				Total marks	3	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q10	0	R1	C11	begins to consider criteria	1 or	drags in 1 item from each group total missing or wrong
	0	A1	C2	improves consideration of criteria	2 or	drags in 1 item from each group and totals correctly but not within required calorie range
	0	I	C2	fully considers all criteria	3	drags in 1 item from each group and totals correctly to give solution in required range (700-800) 4 possible answers: Fish cakes + Veg pasta + Glazed fruit = 721 Fish cakes + Veg pasta + Fruit jelly = 757 Fish cakes + Turkey & Bacon + Glazed fruit = 707 Fish cakes + Turkey & Bacon + Fruit jelly = 743
				Total marks	3	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q11	O	R2	C9	Shows process to calculate area either in metres OR in numbers of tiles	1 or	<p>Process to calculate area in cm or m</p> <p><math>(16 \times 12) - (1' \times 4) (=144)</math></p> <p>OR <math>(4 \times 12) + (12 \times 8) (=144)</math></p> <p>OR <math>(16 \times 8) + (4 \times 4) (=144)</math></p> <p>OR</p> <p>Correct conversions from lengths to number of tiles seen or implied at least 3 must be correct</p> <p>4 m = 8 tiles</p> <p>12 m = 24 tiles</p> <p>16 m = 32 tiles</p> <p>8 m = 16 tiles</p> <p>[Accept answers in cm or m]</p>
	O	A1	C7	<p>Ft from their missing lengths to find area</p> <p>Converts from area to tiles</p> <p>OR</p> <p>Uses tiles to find number of tiles</p>	2	<p>Finds value of area in metres or centimetres AND</p> <p>Uses area to find number of tiles</p> <p><math>"144" \div 0.5^2</math> OR <math>"144" \times 2 \times 2</math> oe</p> <p>OR Use number of tiles to find total complete method</p> <p><math>(32 \times 24) - (24 \times 8)(= 576)</math></p> <p>OR <math>(8 \times 24) + (24 \times 16)</math></p> <p>OR <math>(32 \times 16) + (8 \times 8) (= 576)</math> seen</p>
Question	O/C	SS	C+R	Evidence	Mark	Notes



Q11 cont	C	A1	C8	Converts from metres to tiles Correct number of tiles	1	576 ft
				<b>Total marks</b>	<b>3</b>	
Q12	O	R1	C10	Resizes pictures to scale	1 or	Pictures are correct size
	O	R1	C10	Includes criteria	2 or	Pictures are correct distance apart OR correct distance between pictures and wall, window, ceiling and cupboards
	O	I	C10	Includes all criteria	3	Complete correct plan
				<b>Total marks</b>	<b>3</b>	

Question	O/C	SS	C+R	Evidence	Mark	Notes
Q13	O	R3	C2	method to calculate deposit or method to calculate monthly payments for A	1 or	eg $25/100 \times 5600 (=1400)$ or $0.25 \times 5600 (=1400)$ OR $400 \times 12 (=4800)$
	O	A1	C3	method to calculate deposit and method to calculate monthly payments for A	2	eg $25/100 \times 5600 (=1400)$ or $0.25 \times 5600 (=1400)$ AND $400 \times 12 (=4800)$ accept 6200 seen
	C	A1	C7	interprets correctly and converts to monthly time periods and attempts to calculate for B	1 or	$3 \times 12 \times 200$ oe
	O	A1	C2	calculates correct total cost method B or method A	2	7200 for B
	O	I	C1	Interprets correctly (ft) to find difference in cost	1	1000 or -1000 seen ft cost for A and B
				<b>Total marks</b>	<b>5</b>	<b>SC 1000 in AB with no working in WB scores 2 marks in total</b>