FUNCTION MACHINES

Pearson Edexcel - Tuesday 19 May 2020 - Paper 1 (Non-Calculator) Foundation Tier

1.

12	(a)	11	B1	cao	
	(b)	22	M1	Starts to find input using inverse operations, 41 + 3 (= 44) **or** sight of +3 **and** ÷2 **or** derivation of equation eg $2n - 3 = 41$	+3 and ÷2 could be seen in a flow diagram Evidence could be provided by algebraic statement, numerical statements or by diagrams
			A1	cao	

Pearson Edexcel - Thursday 8 November 2018 - Paper 2 (Calculator) Foundation Tier

2.

10	(a)	38	B1	cao	
	(b)	6	M1	starts process to find input using inverse operations eg 28 + 2 **or** sight of +2 ÷ 5 **or** by forming an equation eg $x \times 5 - 2 = 28$	+2 ÷ 5 could be seen in a flow diagram
			A1	cao	

OCR Thursday 6 June 2019 – Morning (Non-Calculator) Foundation Tier

3.

6	**(a)**	**(i)**	32	**1**		
		(ii)	9	**2**	**M1** for either step reversed **soi**	eg +3, ÷ 5, 45
	(b)		$y = 5x - 3$ final answer	**2**	**M1** for $5x - 3$ **seen** or $y = 5x + 3$ in final answer or $y = kx - 3$ ($k \neq 0$) in final answer or $y = 5x - c$ where $c > 0$ If 0 scored **SC1** for $x = \frac{y+3}{5}$ final answer	Accept $5x - 3 = y$ Allow $x \times 5 - 3$ for 1 or 2 marks Accept $5x + 3 = y$ or $kx - 3 = y$ or $5x - c = y$

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4.

8			$[y =] \frac{x}{3} + 9$ or $[y =] x \div 3 + 9$ final answer	2	**M1** for $[y =] \frac{x}{3} + k$ or $[y =] jx + 9$	$j \neq 0$

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5.

8	a		140 isw	2	B1 for 120 seen	Accept 2 h[ours] 20 m[inutes]
	b		2.5 oe	2	B1 for 75 seen or M1 for *their* 75 ÷ 30 correctly evaluated	To 2 significant figures or better

Pearson Edexcel – Sample Papers - Paper 3 (Calculator) Foundation Tier

6.

7	(a)		8	B1	
	(b)	11 + 4 = 15 15 ÷ 3 = 5	5	M1 A1	Start of method
	(c)	in 0 1 2 3 4 out -4 -1 2 5 8	2	M1 C1	For complete method that leads to answer e.g table of values or $x = 3x - 4$ For 2 or for statement that the equation has a unique solution

AQA Thursday 4 June 2020 – Morning (Calculator) Foundation Tier

7.

Q	Answer	Mark	Comments
10(a)	73	B1	
	Additional Guidance		
	Mark output box if answer line blank		

Q	Answer	Mark	Comments
10(b)	–21	B1	
	Additional Guidance		
	Mark output box if answer line blank		

Q	Answer	Mark	Comments
10(c)	3	B1	

AQA Thursday 11 June 2019 – Morning (Calculator) Foundation Tier

8.

11(a)	+ 2	B1	
	Additional Guidance		
	$+\frac{10}{5}$		B0
	$a + 2$		B0

11(b)	$(y =) \frac{x}{2} + 4$	B1	oe eg $(y =) 0.5x + 4$ or $(y =) \frac{x+8}{2}$
	Additional Guidance		
	Condone $x \div 2 + 4$		B1

AQA Wednesday 8 November 2017 – Morning (Calculator) Foundation Tier

9.

8a	**Alternative method 1**		
	× 7 in first box and –2 in second box and q in Output	B2	B1 for any two correct accept $q = 7r - 2$ in Output
	Alternative method 2		
	$-\frac{2}{7}$ in first box and × 7 in second box and q in Output	B2	B1 for any two correct accept $q = 7r - 2$ in Output
	Additional Guidance		
	Do not accept $7r - 2$ alone in Output		
	Accept $= q$ in Output		
	Condone 7 × in first box		

8b	$3(x + 5)$	B1	oe $3x + 15$ Accept $y = 3(x + 5)$ or $y = 3x + 15$
	Additional Guidance		
	Ignore further work if attempting to solve eg $3x + 15 = 0$, $x = -5$		B1
	Do not ignore further work if attempting to simplify eg $3x + 15 = 18x$		B0
	$(y =) x + 5 \times 3$		B0
	Do not accept $(x + 5)3$ or $3 \times (x + 5)$ or $(x + 5) \times 3$ or $x3 + 15$		B0

AQA Tuesday 13 June 2017 Morning– Morning (Calculator) Foundation Tier

10.

7(a)	10	B1	

7(b)	–14	B1	

AQA Sample Paper 2– Morning (Calculator) Foundation Tier

11.

7(a)	Yes, gives correct answer as inverse operations and order does not matter	B1	oe
7(b)	No, does not work, inverse operations not in correct order	B1	oe

AQA Sample Paper 2– Morning (Calculator) Foundation Tier

12.

18	$7x - 4$ or $3x + 2$	M1	
	$7x - 4 = 3(3x + 2)$ or $7x - 4 = 9x + 6$	M1	
	$7x - 9x = 6 + 4$ or $-2x = 10$ or $-4 - 6 = 9x - 7x$ or $-10 = 2x$	M1	oe Collecting like terms
	–5	A1	

AQA Sample Paper 3– Morning (Calculator) Foundation Tier

13.

11(a)	6, 9, 12, 15 or difference of 3 or $3n$ or $2n$ seen	M1	
	$(n +)\ 2n + 3$ or $3n + 3$ or $3(n + 1)$ or $3 \times 100 + 3$	M1dep	oe
	303	A1	
11(b)	$\times 2 \quad +3$	B1	