



GCSE Foundation/Higher 01

Number



Mark scheme



33 minutes



30 marks

Integers

M1.	(a) Identifies at least 1 pair of factors 2 (x) 63, 3 (x) 42, 6 (x) 21, 7(x) 18, 9 (x) 14 Accept eg 3,6,7 Do not accept 1 (x) 126	M1	[4]
	$2 \times 3 \times 3 \times 7$ oe must see multiplication signs SC1 for 2 (x) 3 (x) 7	A1	
	(b) Identifies at least 1 pair of factors 2 (x) 36, 3 (x) 24, 4 (x) 18, 6 (x) 12, 8 (x) 9 or 2 (x) 2 (x) (2) (x) 3 (x) 3 Do not accept 1 (x) 72	M1	
	18 SC1 for 6 or 9 or $2 \times 3 \times 3$	A1 ft	
M2.	$(50 - 43)$ red or 7 red or 14 (red) or 36 (blue and yellow) $R + 3Y + Y = 43$ or $2R + 3Y + Y = 50$ oe or $R = 7$	M1	[3]
	their $36 \div 4$ $4Y = 43 - 7$ oe	M1 dep	
	9	A1	
M3.	(a) $\frac{3}{10}$ oe fraction	B1	[2]
	(b) (0).04	B1	

M4. (a) (i) 2×2^2 or 2×3^2 or 2×5^2

M1

All three

A1

(ii) 98

B1

(b) $2 \times 3 \times 7$ or 42

*B1 Any number with exactly 3 different
prime factors except 30*

B2

[5]

M5. Always even

B1

Could be either odd or even

B1

[2]

M6. (a) $3 \times (-2) + 20$

-6 seen

M1

14

A1

(b) $3 \times 16 + 5$

M1

53

A1

(c) Any k which is a multiple of 4

*eg 1 $\frac{1}{2} \times 4 + 1 (= 3)$ or $\frac{1}{2} 4 + 1$
eg 2 $K = 8$*

B1

(d) Sum of 2 + any other prime

nb 1 is not prime: $1 + 2 = 3$ B0

B1

[6]

M7. (a) Full explanation. E.g.

O – 1 is always E and

E + E is always E, or

E + O is always O and

O – 1 is always E

B1 one or more examples with conclusion, or,

O – 1 is always E, or,

E + E is always E, or,

E + O is always O

B2

(b) 2 identified as even prime

E.g. $O + E - 1$ is always E and 2 is an even prime

E.g. $1 + 2 - 1 = 2$

B1

[3]

M8. (a) Won 5 Drawn 2 Lost 3

B1

Won 4 Drawn 5 Lost 1

SC1 5 2 0 and 4 5 0

SC1 5 2 - and 4 5 -

B1

(b) Indicates possible outcomes of the
two matches that produce an even total
1 win and 1 loss or
1 draw and 1 loss

*Allow: **exactly** one match is lost*

B1

[3]

M9. Sum of two consecutive integers is $2 \times$ lower number plus 1
[or $2 \times$ higher number -1] which is odd

B1 for $2 \times$ smaller is even

Or $2 \times$ larger is even

Or $2n + 1$

Or odd plus even is odd *B1*

even plus odd is odd *B1*

Or SC1 for any example

eg $27 + 28 = 55$

B2 for:

$n + (n + 1) = 2n + 1$ which is odd

Or

One of the numbers is odd

The other number is even

The total is odd

B2

[2]

