# GCSE Foundation 01

*Number*

193 minutes

187 marks

*Integers*

**M1.** (a) 21 and 35

*B1 for 1 correct (and 1 incorrect)*
*or 2 correct and 1 incorrect*

**B2**

(b) 6 and 10

*B1 for 1 correct (and 1 incorrect)*
*or 2 correct and 1 incorrect*

**B2**

(c) 16 and 25

*B1 for 1 correct (and 1 incorrect)*
*or 2 correct and 1 incorrect*

**B2**

**[6]**

**M2.** 85 and 115

*Either order*
*B1 for 2 numbers adding to 200*
*B1 for 2 numbers with a difference of 30*
*B1 for 1 correct*

**B2**

**[2]**

**M3.** (a) Accept any two whole numbers ending in a 0 or 5

*eg 0, 5, 10, 15, 20*

**B1**

(b) Any two of 1, 2, 3, 6, 9 or 18

**B1**

(c) Any two of 16, 25, 36 or 49

*B1 for 1 correct and 1 incorrect.*
*B1 for any two of $4^2$,$5^2$,$6^2$,$7^2$*
*B1 for any two other square numbers*

**B2**

**[4]**

**M4.** (a) 1200

**B1**

(b) 120 000

**B1**

(c) $10^6$

**B1**

**[3]**

**M5.** Sight of 98 or 99

**B1**

98 + 99 (= 197)

**M1**

43

*SC2 for 42 [ from 240 − (2 × 99) ]*

*SC1 for any three 2-digit numbers that total 240*

**A1**

**[3]**

**M6.** $n^2 - 1$ worked out correctly for at least one value of $n$

*0, 3, 8, 15, 24, 35 …*

**M1**

A correct calculation eg $6^2 - 1 = 35 (= 7 \times 5)$ or $8^2 - 1 = 63 (= 7 \times 9)$

*oe*

*If incomplete eg $6^2 - 1$ or n = 6 award M1 A0*

**A1**

**[2]**

**M7.** (a) Three thousand eight hundred (and) forty

**B1**

(b) 5012

**B1**

(c) 400

*oe*

*Accept (four) hundred(s)*

**B1**

(d) 3000

**B1**

(e) Any correct method of a subtraction with not more than one error

**M1**

142

*SC1 152 or 242*

**A1**

**[6]**

**M8.** (a) 16

**B1**

(b) 10

**B1**

(c) 23

**B1**

(d) 27

**B1**

**[4]**

**M9.** (a) 3 7 13

*B1 for 2 correct and 0 incorrect or for 3 correct and 1 incorrect*

**B2**

(b) At least two correct substitutions evaluated correctly if answer not given

*5, 11, 17, 23, 29, 35, …*

**M1**

($n$ =) 6

*or other correct values eg 11 or 13 or 16 or 20*

**A1**

**[4]**

**M10.** (a) 14 and 15

*Either order*

**B1**

(b) 31

**B1**

(c) 17

**B1**

(d) 42

**B1**

(e) 49

**B1**

**[5]**

**M11.** 5 + 9 or 14 or 10 + 18

**M1**

28

**A1**

**[2]**

**M12.** Valid mathematical statement for 21

*eg in the 7 times table*
*Not a multiple of 5*

**B1**

Valid mathematical statement for 25

*eg square number or factor of 50*

**B1**

**[2]**

**M13.**

| 3 | 6 | 9 | 12 | 18 |
|---|---|---|---|---|
| 8 or 20 | or 12 | or 4 | or 8 | |
| 20 | 5 | 10 | 15 | 5 |

*B2 total 31 with 2 correct multiples*

*B1 total 31 with 1 correct multiple or three correct multiples but total not 31*

*or listing multiples of 3, 4 and 5 (minimum of two multiples of each number)*

**B3**

**[3]**

**M14.** (a) D or (£)131 750

**B1**

(b) A or (£)132 500

**B1**

(c) 132 500 − 131 750

*ft their answer to parts (a) and (b)*

**M1**

750

*ft their answer to parts (a) and (b)*

**A1 ft**

(d) 13 240

*Allow 13 240.0 or 13 240.00*

**B1**

**[5]**

**M15.** 51 = 3 × 17

*oe Multiplications **must** be shown*
*any order*

**B1**

55 = 5 × 11

**B1**

58 = 2 × 29

**B1**

**[3]**

**M16.** (a) Five thousand (and) two hundred (and) forty seven

**B1**

(b) 5200

**B1**

(c) 7542

**B1**

(d) 2574

*B1 for 2457 or any number ending in 2 or 4 using all 4 cards*

**B2**

**[5]**

**M17.** 2 × 1.7(0) or 3.4(0) or 3 × 2.25 or 6.75

*or 2 × 170 or 340 or 3 × 225 or 675 oe*

**M1**

their 3.40 + their 6.75

*oe*

*Award M2 for 2 × 170 + 3 × 225 or 170 + 170 + 225 + 225 + 225*

**M1 dep**

(£)10.15 or 1015(p)

**A1**

Correct conclusion from their working with all calculations shown

*Strand (iii)*

*Both Ms awarded and working seen*

**Q1**

**[4]**

**M18.** 40 15 5
or 20 30 10

*B1 A + B + C = 60 (must be different)*

*B1 A is a multiple of 10*

*B1 B = 3C*

*eg B2 for 20 10 30*

*B2 for 0 45 15*

*B2 for 30 22.5 7.5*

*B2 for 90 −30 −10*

**B3**

**[3]**

**M19.** Never true

**B1**

Sometimes true

**B1**

Sometimes true

**B1**

**[3]**

**M20.** (a) Five thousand, four hundred and seventy two

**B1**

(b) 2457

**B1**

(c) 7425

*B1 for 7542 or any other odd number using these 4 digits*

**B2**

(d) 5500

**B1**

**[5]**

**M21.** (a) (i) Multiple of 6 > 20

*eg 24, 30, 36, …*

**B1**

(ii) 1 or 2 or 4 or 5

**B1**

(b) Square root
Square
Cube root

*B1 for each correct answer*

**B3**

(c) 52

**B1**

**[6]**

**M22.** 150 − 100 or 50 or 285 − 200 or 85

**M1**

their 50 × 12 or 600 or 6

**M1**

their 85 × 10 or 850 or 8.5(0)

**M1**

their 6 + their 8.5(0) + 15

*oe* *Allow mixed units*

**M1**

29.50

*Strand (i)*
*Correct notation*
*Do not accept 29.5*
*SC4 14.50*
*SC3 14.5*

**Q1**

**[5]**

**M23.** 60 × 3 ÷ 2 or 90 seen

*oe*

**M1**

their 90 × 3 ÷ 2

*oe*

**M1 dep**

135

**A1**

**[3]**

**M24.** (a) 16 or 9 seen

**M1**

7 (is prime)

**A1**

(b) Two different correct solutions

eg $x = 2,\ y = 1$ $x = 3,\ y = 2$

$x = 6,\ y = 5$ $x = 10,\ y = 9$

*B2 for one correct solution*
*B1 for one correct trial*

**B3**

**[5]**

**M25.** (a) Five thousand one hundred and sixty seven

**B1**

(b) 7400

**B1**

(c) 17 000

**B1**

(d) 16 684 – 1184

**M1**

15 500

**A1**

**[5]**

**M26.** (a) (i) 70

**B1**

(ii) 5

**B1**

(iii) 25

**B1**

(iv) 75

**B1**

(b) 150

*oe B1 for* $\frac{70}{35}$ *or 2 seen*

**B2**

**[6]**

**M27.** (a) $\frac{2}{8}$ and $\frac{6}{24}$

*B1 One correct (and one incorrect)*
*B1 Two correct and one incorrect*
*Accept any indication*

**B2**

(b) 25

**B1**

(c) Likely

*Accept any indication*

**B1**

(d) Attempts a quarter circle

*Be generous if intention clear*

**B1**

**[5]**

**M28.** (a) (£) 0.70 (p)

*oe*

*Accept 70 p*

**B1**

(b) 1000 g

*1 kg*

**B1**

(c) 1300 seen or used

*eg, sight of £4.25*

**M1**

4.25 + 0.75

**M1dep**

(£) 5

*SC1 for (£)1.38*

**A1**

**[5]**

**M29.** Fact 1 ✓
Fact 2 ✗
Fact 3 ✗
Fact 4 ✗
Fact 5 ✓

*B2 3 or 4 correct*

*B1 1 or 2 correct*

**B3**

**[3]**

**M30.** (a) (20)03

**B1**

(b) 11

**B1**

(c) 8, 11, 16, 26, 22

*Any 4 correct*

**M1**

(20)04 and (20)05

*SC1 (20)05 and (20)06*

**A1**

**[4]**

**M31.** (a) 50 ÷ 4.99 or 50 ÷ 5

**M1**

10

**A1**

(b) 20 × (£) 5(.00) without error

*Sight of 49.9 or 99.8 or 4 × 20*

**M1**

No and valid explanation

*eg, Decimal point in wrong place*
*About (£) 100*
*4 × 20 = 80*
*5× 20 = 100*
*Correct answer is (£) 99.8(0)*
*Arithmetic errors made is M1A0*

**A1**

**[4]**

**M32.** (a) 42

**B1**

(b) 5

**B1**

(c) 12 (÷ 3)

**M1**

4

**A1**

**[4]**

**M33.** (a) 4, 6, 8 and 12 or 3, 6, 9 and 12

*Any order*

**B1**

(b) 6 or 12 or 18

**B1**

(c) 3, 6, 9 and 18

*B1 2 correct with 0 incorrect*
*or 3 correct with 0, 1 or 2 incorrect*
*or 4 correct with 1 or 2 incorrect*

**B2**

(d) 9 (–) 4

**M1**

(±) 5

**A1**

**[6]**

**M34.** Any correct values
eg, 8 + 10 = 18

*B1 For meeting 3 of the following 4 correct multiples of 4, 5, 6 except 4, 5 and 6 Correct addition*
*eg, 8 + 15 = 23, 16 + 8 = 24, 16 + 10 = 26, 16 + 10 = 24*
*or Four or more multiples for two of 4 or 5*
*or 6 listed*
*eg, 4, 8, 12, 16..., 5, 10, 15, 20...*

**B2**

**[2]**

**M35.** Any correct values
eg, 8 + 10 = 18

*B1 For meeting 3 of the following 4 correct multiples of 4, 5, 6 except 4, 5 and 6 Correct addition*
*eg, 8 + 15 = 23, 16 + 8 = 24, 16 + 10 = 26, 16 + 10 = 24*
*or Four or more multiples for two of 4 or 5*
*or 6 listed*
*eg, 4, 8, 12, 16..., 5, 10, 15, 20...*

**B2**

**[2]**