1 71 73 75 77 79 81 87

From this list of numbers write down

(a) a prime number

71 or 73 [1]

(b) a square number.

81 [1]

4 80 81 82 83 84 85 86 87 88 89

From the list of numbers, write down a prime number.

83 or 89 [1]

1 Write down a cube number between 10 and 100.

27 or 64 [1]

3 21 24 25 27 29 39 48

From the list of numbers, write down

(a) the prime number,

29 [1]

(b) the cube number.

27 [1]

2 120 121 149 164 216

From this list, write down

(a) a square number

121 [1]

(b) a cube number.

216 [1]

2 91 93 95 97 99

divisible by 7

From this list write down a prime number.

97 [1]

1 | 12 | 15 | 27 | 29 | 91 | 93 |

From the list of numbers, write down

(a) a cube number

27 [1]

(b) a prime number.

29 [1]

7 12 18 29 49 91 125

From the list of numbers, write down

(a) a cube number,

125 [1]

(b) a prime number.

29 [1]

1 32 33 34 35 36 37 38 39

From this list of numbers, write down

(a) a multiple of 8,

32 [1]

(b) a square number,

36 [1]

(c) a prime number.

37 [1]

÷7 ÷3

1 29 31 41 49 51 59

From this list, write down **all** the numbers that are prime numbers.

29, 31, 41, 59 [2]

÷3 ÷7 ÷3 ÷11 ÷3

1 31 37 39 49 51 53 77 87

From this list write down **all** the prime numbers.

31, 37, 53 [2]

2 There are two prime numbers in this list.

27 47 57 61 75 93

÷3 ÷3 ÷5 ÷3

Work out the sum of these two prime numbers.

47 + 61 = 108 [2]

2

61	63	64	66	68	69

From this list, write down

(a) a cube number

64 [1]

(b) a prime number.

61 [1]

3

÷12

$\frac{2}{5}$	$\sqrt{15}$	23	$\sqrt{144}$	−2	0.8

From this list, write down

(a) a natural number (positive integers: 1, 2, 3, 4, etc.) 23 (or $\sqrt{144}$) [1]

(b) an irrational number.

$\sqrt{15}$ [1]

10 **(a)** Write down **all** the factors of 18.

18	
1	18
2	9
3	6

1, 2, 3, 6, 9, 18 [2]

1 Write down a factor of 28 that is a prime number.

28	
1	28
2	14
4	7

2 or 7 [1]

1 Write down a prime number between 30 and 40.

31 or 37 [1]

(c) Write down a prime number between 80 and 90.

83 or 89 ..... [1]

2 90 91 92 93 94 95 96 97 98 99

÷7 ÷3

From this list, write down

(a) a prime number,

97 ..... [1]

(b) a common multiple of 4 and 6.

4: 4, 8, 12, 16, 20, 24 ...

6: 6, 12, 18, 24, ...

12 (or 24, 36, 48 ...) ..... [1]

2 Find the highest **odd** number that is a factor of 60 and a factor of 90.

60	
1	60
2	30
3	20
4	15
5	12
6	10

90	
1	90
2	45
3	30
5	18
6	15
9	10

15 ..... [1]

1 Write down the cube number that is greater than 50 but less than 100.

$4^3 = 64$

64 ..... [1]

3 **(a)** A number is greater than 1.
The number is also both a square number and a cube number.

Write down a possible value of this number.

$8^2 = 64$

$4^3 = 64$

64 ..... [1]

(b) Write down a prime number between 90 and 100.

97 (only) ..... [1]

6 (a) Explain why 111 is not a prime number.

It is divisible by 3 : $3\overline{)111}$ (0 3 7) [1]

(b) Find a prime number between 110 and 120.

117 is divisible by 3
119 is divisible by 7

113 (only) [1]

3

11 13 15 17 19

From this list, write down the number that is both a prime number and a factor of 195.

195	
1	195
3	65
5	39
(13)	15

13 [1]

4 Write down

(a) a square number greater than 10,

16 or 25 or 36 or 49 ... [1]

(b) an irrational number.

(usually a square root which doesn't give an integer answer, or something like π)

eg. $\sqrt{15}$ or π [1]

1 Write down

(a) a square number between 101 and 150

121 or 144 [1]

(b) a fraction between $\frac{2}{3}$ and $\frac{3}{4}$

$\frac{8}{12}$ $\frac{9}{12}$

between these: $\frac{8}{12}$ $\frac{9}{12}$

$\frac{16}{24}$ $\frac{17}{24}$ $\frac{18}{24}$

$\frac{17}{24}$ [1]

(c) an irrational number between 6 and 7.

6 7

$\sqrt{36}$ $\sqrt{49}$

any square root between here

$\sqrt{40}$ or 2π [1]

(or many others)

eg. $\sqrt{37}$, $\sqrt{38}$, ...

7 Write down an irrational number between 3 and 4.

3 → $\sqrt{9}$ 4 → $\sqrt{16}$

$\sqrt{10}$ or π (or many others) ..... [1]

1 3.56 5 $\sqrt{196}$ 8 $\sqrt{7}$ 12

$\sqrt{196} = 14$

From the list, write down a number that is

(a) a multiple of 3,

12 ..... [1]

(b) a cube number,

$2^3 = 8$

8 ..... [1]

(c) a prime number,

5 ..... [1]

(d) an irrational number.

$\sqrt{7}$ ..... [1]

7 **(a)** Complete these statements.

The reciprocal of 0.2 is 5 ($\frac{1}{5}$)

A prime number between 90 and 100 is 97 [2]

(b) $\frac{7}{5}$ 0.6 $\sqrt{7}$ 8 $\sqrt{9}$ ($= 3$)

From this list, write down an irrational number.

$\sqrt{7}$ ..... [1]

1 P is a prime number where $60 < P < 80$.
P is 2 less than a square number.

Find the value of P.

Squares: 64, 81

two less: 62, 79 ✓

62 not prime

$P =$ 79 [2]