

**Q1.**

Put these values in order with the smallest first

$5^2$	$3^2$	$3^3$	$2^3$
<input style="width: 60px; height: 40px;" type="text"/>	<input style="width: 60px; height: 40px;" type="text"/>	<input style="width: 60px; height: 40px;" type="text"/>	<input style="width: 60px; height: 40px;" type="text"/>
smallest			largest

1 mark

**Q2.**

A **square** number and a **prime** number have a total of 22

What are the two numbers?

<input style="width: 150px; height: 40px;" type="text"/>	+	<input style="width: 150px; height: 40px;" type="text"/>	= 22
square number		prime number	

1 mark

**Q3.**

Here is a sorting diagram for numbers.

Write a number less than 100 in each space.

	even	not even
a cube number		
not a cube number		

2 marks

**Q4.**

Find two **square numbers** that total 45

<input style="width: 60px; height: 40px;" type="text"/>	+	<input style="width: 60px; height: 40px;" type="text"/>	= 45
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1 mark

**Q5.**

Here is a sorting diagram for numbers.

Write a number **less than 100** in each space.

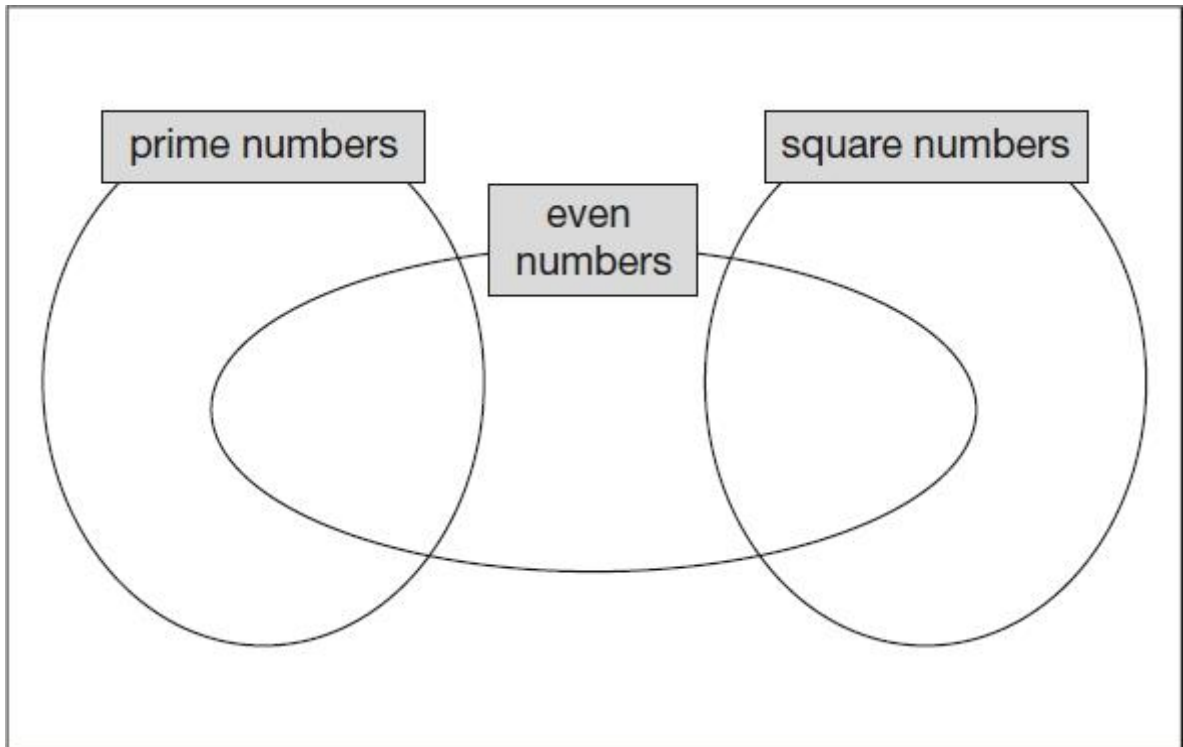
	even	not even
a square number		
not a square number		

2 marks

**Q6.**

Write each number in its correct place on the diagram.

16      17      18      19



2 marks

**Q7.**

36 and 64 are both square numbers

They have a sum of 100

Find two **square** numbers that have a sum of **130**

and

1 mark

## Mark schemes

**Q1.**

$$2^3 \quad 3^2 \quad 5^2 \quad 3^3$$

*Accept 8, 9, 25, 27*

[1]

**Q2.**

Both numbers correct as shown:

9	+	13	=	22
square number		prime number		

*Numbers must be in the correct order.*

**Do not accept:**

$3^2$	+	13	=	22
square number		prime number		

[1]

**Q3.**

Award **TWO** marks for four correct numbers, e.g.

	even	not even
a cube number	<b>64</b>	<b>27</b>
not a cube number	<b>4</b>	<b>5</b>

Award **ONE** mark for any three correct.

[2]

**Q4.**

36 **AND** 9

*Numbers may be given in either order.*

[1]

**Q5.**

Award **TWO** marks for a correct number written in each of the four boxes.

	even	not even
a square number	0 OR 4 OR 16 OR 36 OR 64	1 OR 9 OR 25 OR 49 OR 81
not a square number	even AND not a square AND less than 100	odd AND not square AND less than 100

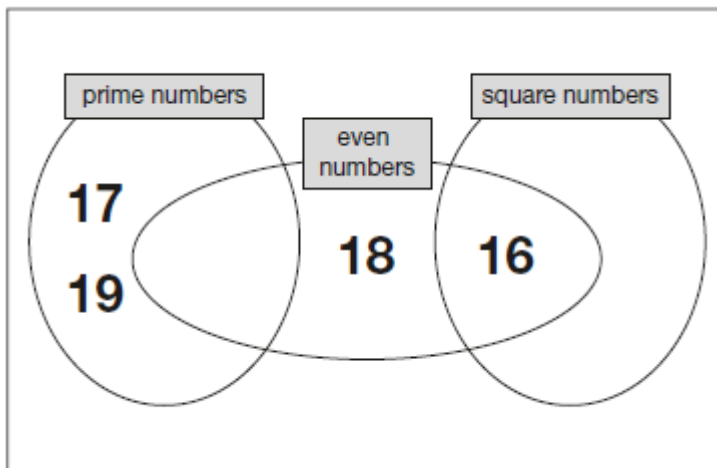
If the answer is incorrect, award **ONE** mark for three boxes completed correctly.  
*Accept more than one number in each box, provided all are correct.*

Up to 2

[2]

**Q6.**

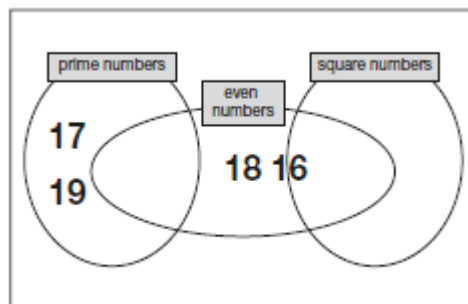
Award **TWO** marks for all four numbers placed correctly as shown:



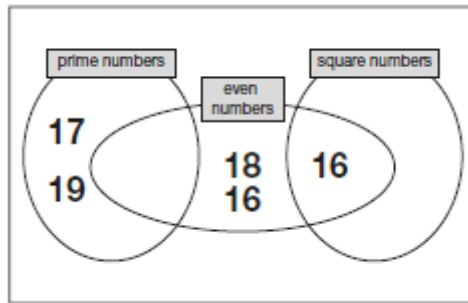
If the answer is incorrect, award **ONE** mark for three numbers placed correctly.

*Accept alternative unambiguous indications, e.g. lines drawn from the numbers to the appropriate regions of the diagram.*

**Do not** accept numbers written in more than one region, e.g.



**OR**



Up to 2m

[2]

**Q7.**

49 AND 81

**OR**

121 AND 9

*Numbers may be given in either order.*

U1

[1]