Types of Number - Worksheet

Skill

Group A - Odd and even numbers

Use the clues to identify the numbers described below:

1) The greatest odd number formed by the digits 2, 8 and 5

2) The smallest even number formed by the digits 4, 3, 1 and 6

3) The smallest odd number formed by the digits 7, 2 and 9

4) The greatest even number formed by the digits 5, 7, 6 and 1

5) The smallest odd number formed by the digits 4, 7, 3 and 2

6) The greatest odd number formed by the digits 1, 9 and 8

7) All possible odd numbers formed by the digits 7, 4 and 9

8) All possible even numbers formed by the digits 2, 5 and 3

9) All possible odd numbers formed by the digits 3, 6 and 2

10) All possible even numbers formed by the digits 6, 1 and 8

11) All possible even numbers formed by the digits 6, 3 and 7

12) All possible odd numbers formed by the digits 9, 5 and 6

Group B - Prime numbers and composite numbers

Decide whether the numbers below are prime or composite:

1) 67	**2)** 530	**3)** 41
4) 825	**5)** 19	**6)** 87
7) 62	**8)** 293	**9)** 157
10) 68	**11)** 91	**12)** 383

Types of Number - Worksheet

Group C - Types of number problem solving

Use the clues to identify the numbers described below:

1) A prime number that is a factor of 16

2) A two-digit triangular number that is a multiple of 5

3) A two-digit number that is:
   - a square number
   - greater than 10
   - a number with only 3 factors

4) A two-digit number that is:
   - a triangular number
   - a multiple of 7
   - a number with 4 factors

5) A square number that is:
   - less than 100
   - a triangular number
   - not 1

6) A prime number between 20 and 30

7) Two prime numbers with a product of 39

8) Two square numbers that add to give a total of 100

9) A two-digit number that is:
   - a square number
   - a cube number
   - not 1

10) The smallest number greater than 200 that is a multiple of 6

11) The first even number that is a multiple of 5 and 7

12) Two square numbers that add to give a total of 85

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Types of Number - Worshet

Applied

1) Sort the square and cube numbers into the Venn diagram.

7^2 8^3 6^2 12^3 3^3 9^2

Less than 100   Even number
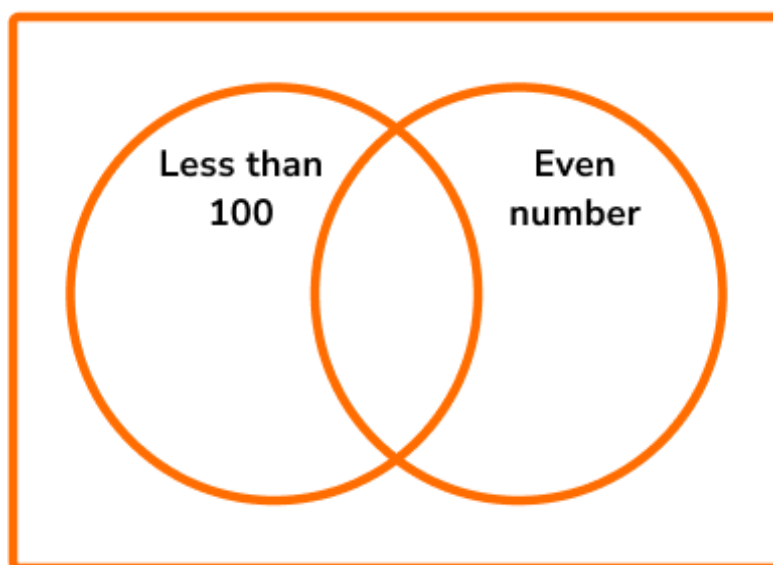
2) Complete the sum below, using all of the numbers 1, 2, 3, 4, 5 and 6, to find the smallest odd number.

☐☐☐ — ☐☐☐

3) Complete the sum below, using all of the numbers 1, 2, 3, 4, 5 and 6, to find the biggest odd number.

☐☐☐ — ☐☐☐

Types of Number - Worksheet

4)   Match the square and cube numbers to the correct cards.

144

64

729

121

8^2

12^2

9^3

5)   Use the 5 cards shown to complete the statements below.

7^3 100 11^3 4^2 125

▢ < ▢

▢ > ▢

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Types of Number - Exam Questions

1) Identify:

    (a) The square of 6   ....

                                                                                (1)

    (b) The square root of 64   ....

                                                                                   (1)

    (c) The cube root of 27   ....

                                                                                   (1)

    (d) The next prime number after 23   ....

                                                                                 (1)

                                                                  (4 marks)

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2) Here is a list of numbers.

6, 7, 9, 11, 13, 20, 26, 47, 51

From this list write down:

    (a) An even number   ....

                                                                                   (1)

    (b) A square number   ....

                                                                                (1)

    (c) Two numbers with a sum of 37   ....

                                                                                 (1)

    (d) Two numbers with a difference of 25   ....

                                                                                 (1)

    (e) A multiple of 5   ....

                                                                               (1)

    (f) A factor of 33   ....

                                                                               (1)

                                                                   (6 marks)

Types of Number - Exam Questions

3)

5	20	26
6		
	33	
		28
25	12	

From the box write down:

(a)   A square number   ....
(1)

(b)   A number that is a multiple of 7   ....
(1)

(c)   Two numbers that are factors of 40   ....
(2)

(d)   Two numbers with a sum of 59   ....
(2)
(6 marks)

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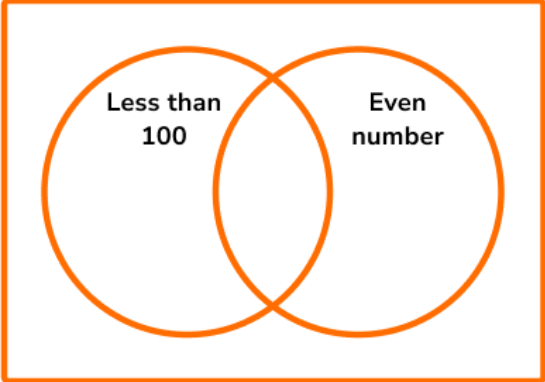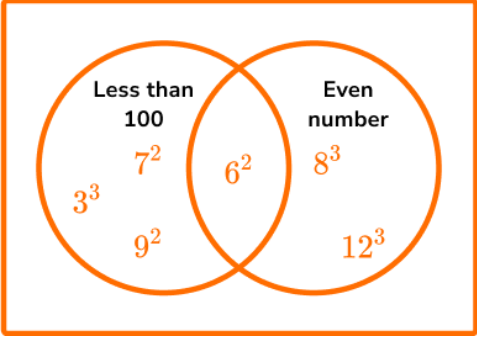
Types of Number - Answers

	Question	**Answer**
	Skill Questions	
Group A	Use the clues to identify the numbers described below: **1)** The greatest odd number formed by the digits 2, 8 and 5. **2)** The smallest even number formed by the digits 4, 3, 1 and 6. **3)** The smallest odd number formed by the digits 7, 2 and 9. **4)** The greatest even number formed by the digits 5, 7, 6 and 1. **5)** The smallest odd number formed by the digits 4, 7, 3 and 2. **6)** The greatest odd number formed by the digits 1, 9 and 8. **7)** All possible odd numbers formed by the digits 7, 4 and 9. **8)** All possible even numbers formed by the digits 2, 5 and 3. **9)** All possible odd numbers formed by the digits 3, 6 and 2. **10)** All possible even numbers formed by the digits 6, 1 and 8. **11)** All possible even numbers formed by the digits 6, 3 and 7. **12)** All possible odd numbers formed by the digits 9, 5 and 6.	**1)** 825 **2)** 1346 **3)** 279 **4)** 7516 **5)** 2347 **6)** 981 **7)** 479, 497, 749, 947 **8)** 352, 532 **9)** 263, 623 **10)** 168. 186, 618, 816 **11)** 376, 736 **12)** 569, 659, 695, 965

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Types of Number - Answers

Group B	Decide whether the numbers below are prime or composite: **1)** 67 **2)** 530 **3)** 41 **4)** 825 **5)** 19 **6)** 87 **7)** 62 **8)** 293 **9)** 157 **10)** 68 **11)** 91 **12)** 383	**1)** Prime **2)** Composite ($2 \times 5 \times 53$) **3)** Prime **4)** Composite ($3 \times 5^2 \times 11$) **5)** Prime **6)** Composite (3×29) **7)** Composite (2×31) **8)** Prime **9)** Prime **10)** Composite ($2^2 \times 17$) **11)** Composite (7×13) **12)** Prime
Group C	Use the clues to identify the numbers described below: **1)** A prime number that is a factor of 16 **2)** A two-digit triangular number that is a multiple of 5 **3)** A two-digit square number greater than 10 with only 3 factors. **4)** A two-digit triangular number with 4 factors that is a multiple of 7 **5)** A square number less than 100 that is also a triangular number but is not 1 **6)** A prime number between 20 and 30 **7)** Two prime numbers with a product of 39 **8)** Two square numbers that add to give a total of 100 **9)** A number that is a square number and a cube number that is not 1 **10)** The smallest number greater than 200 that is a multiple of 6 **11)** The first even number that is a multiple of 5 and 7 **12)** Two square numbers that add to give a total of 85	**1)** 2 **2)** 10 or 15 or 45 or 55 **3)** 25 or 49 **4)** 91 **5)** 36 **6)** 23 or 29 **7)** 3 and 13 **8)** 36 and 64 **9)** 64 **10)** 204 **11)** 70 **12)** 36 and 49

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Types of Number - Answers

	Question	Answer
	Applied Questions	
1)	Sort the square and cube numbers into the Venn diagram. $7^2 \quad 8^3 \quad 6^2 \quad 12^3 \quad 3^3 \quad 9^2$	
2)	Complete the sum below, using all of the numbers 1, 2, 3, 4, 5 and 6, to find the smallest odd number.	$412 - 365 = 47$
3)	Complete the sum below, using all of the numbers 1, 2, 3, 4, 5 and 6, to find the biggest odd number.	$654 - 123 = 531$

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Types of Number - Answers

4)	**a)** Match the square and cube numbers to the correct cards. 144 8^2 64 12^2 729 9^3 121	144 64 8^2 12^2 729 9^3 121 (144 matched to 12^2, 64 matched to 8^2, 729 matched to 9^3)
5)	Use the 5 cards shown to complete the statements below. 7^3 | 100 | 11^3 | 4^2 | 125 ☐ < ☐ ☐ > ☐	Any combination of $4^2 < 100, \ 4^2 < 125, \ 4^2 < 7^3$ $4^2 < 11^3, \ 100 < 125, \ 100 < 7^3,$ $100 < 11^3, \ 125 < 7^3, \ 125 < 11^3$ $7^3 < 11^3$ $11^3 > 7^3, \ 11^3 > 125, \ 11^3 > 100$ $11^3 > 4^2, \ 7^3 > 125, \ 7^3 > 100$ $7^3 > 4^2, \ 125 > 100, \ 125 > 4^2$ $100 > 4^2$

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Types of Number - Mark Scheme

		Question	Answer	
		Exam Questions		
1)		Identify:		
	(a)	The square of 6	**(a)** 36	**(1)**
	(b)	The square root of 64	**(b)** 8	**(1)**
	(c)	The cube root of 27	**(c)** 3	**(1)**
	(d)	The next prime number after 23	**(d)** 29	**(1)**
2)		Here is a list of numbers. 6, 7, 9, 11, 13, 20, 26, 47, 51 From this list write down		
	(a)	An even number	**(a)** 6, 20 or 26	**(1)**
	(b)	A square number	**(b)** 9	**(1)**
	(c)	Two numbers with a sum of 37	**(c)** 26 and 11	**(1)**
	(d)	Two numbers with a difference of 25	**(d)** 26 and 51	**(1)**
	(e)	A multiple of 5	**(e)** 20	**(1)**
	(f)	A factor of 33	**(f)** 11	**(1)**

3)		5 20 26
		  6
		   33
		      28
		25 12
		
		From the box write down		

	(a)	A square number	**(a)** 25	**(1)**
	(b)	A number that is a multiple of 7	**(b)** 28	**(1)**
	(c)	Two numbers that are factors of 40	**(c)** 5 and 20	**(1)**
	(d)	Two numbers with a sum of 59	**(d)** 26 and 33	**(1)**