



## Worksheet

Name : \_\_\_\_\_

Subject: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

4, 8, 12, 16, 20, 24, 28, .....

Q1) The sequence continues in the same way.

Complete the sequence, then answer the following questions.

a) Write down the 1st term of the sequence.....4

b) Write down the 5th term of the sequence.....20

c) Write down the 6th term of the sequence.....24

d) Write down the 10th term of the sequence.....40

e) Write down the 20th term of the sequence.....80

f) What is the term-to-term rule?.....+ 4

g) What is the position to term rule?.....x4

Q2) Complete the following sequences:

5, 0, -5, -10, -15, -20, -25.

Term to term rule -5

20, 10, 0, -10, -20, -30, -40.

Term to term rule -10

7, 5, 3, 1, -1, -3, -5.

Term to term rule -2

11, 8, 5, 2, -1, -4, -7.

Term to term -3

4, 2, 0, -2, -4, -6, -8.

Term to term -2

Q3) A sequence starts at 16.

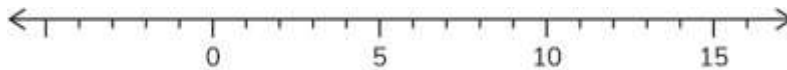
5 is subtracted each time.

What is the first number in the sequence that is less than zero?

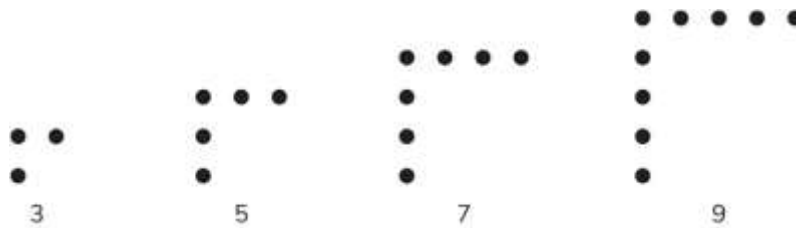
-4

16, 11, 6, 1, -4

Tip: You might find the number line helpful.



Q4) Look at the sequence below. The number of dots in each pattern is written below it.



a) Write down the next four numbers in the sequence.

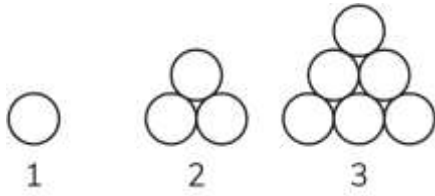
3, 5, 7, 9, 11, 13, 15, 17

b) What is the term-to-term rule?

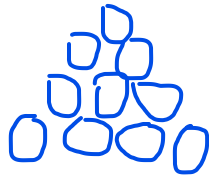
Tip: Look at how you get from one term to the next.

+2

Q5) Look at this sequence of patterns.



a Draw the next pattern in the sequence.



c) Complete the table for the sequence.

Pattern number	Number of circles
1	1
2	3
3	6
4	10
5	15
6	21

d) What is the name for this sequence of patterns?

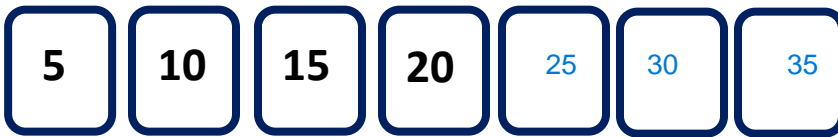
Tip: Think about the shape of the patterns.

Triangular numbers

Q6) Write the same number in both boxes to make this statement correct.

$$\boxed{4} \times \boxed{4} = 16$$

Q7) Here is a part of a sequence.



The sequence continues in the same way.

Complete the sequence, then answer the following questions.

- a) Write down the 5th term of the sequence.....<sup>25</sup>
- b) Write down the 8th term of the sequence.....<sup>40</sup>
- c) Write down the 10th term of the sequence.....<sup>50</sup>
- d) Write down the 20th term of the sequence.....<sup>100</sup>
- e) Lily says that the number 520 will be in the sequence,

Do you think she is right?

☒ Yes ☐ No

Explain your answer.

multiples of 5 end with 0 or 5 and this is the multiples of 5 sequence

Q8) Write the sequence of square numbers. (1-144).

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

Q9) Write the sequence of triangular numbers. (1-55)

1,3,6,10,15,21,28,36,45,55

Q10) Write the sequence of the cube numbers. (1-125)

1,8,27,64,125

Q12) Circle all the cube numbers.

1 4 8 25 16 27 49 64 100 125

Q13) Write a square number in each box to make the statement correct.

$$\boxed{64} + \boxed{36} = \boxed{100}$$

or  $16 + 9 = 25$

## Factors and multiples

Q1) Find the factors of each number.

a) 9



b) 10



c) 18



d) 24



e) 36



2) Write all the factors of the following numbers and decide if the number is a

prime or composite.

a) 27: .....  
composite

b) 25: .....  
composite

c) 17: .....  
prime

d) 12: .....  
composite

e) 7: .....  
prime

prime numbers have only two factors  
composite numbers have more than 2 factors  
1 is not prime nor composite.

**Q3) Find all the factors of the following numbers.**

**a) 15**

1, 3, 5, 15

**b) 24**

1, 2, 3, 4, 6, 8, 12, 24

**c) 30**

1, 2, 3, 5, 6, 10, 15, 30

**d) 12**

1, 2, 3, 4, 6, 12

**Q4)**

**a) Find all the common factors of 12 and 15**

1,3,

**Find the GCF (Greatest common factor) of 12 and 15.**

3

**b) Find all the common factors of 15 and 30**

1,3,5,15

**Find the GCF (Greatest common factor) of 15 and 30.**

15

**c) Find all the common factors of 6 and 9**

factors of 6    1,2,3,6  
factors of 9 :   1,3,9

1,3

**Find the GCF (Greatest common factor) of 6 and 9.**

3

Prime numbers are the numbers that has only 2 factors 1 and the number itself.

## Prime Numbers

A natural number greater than 1 with no divisors other than 1 and itself.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Remember these facts about Prime Numbers!

There are no even numbers except 2.

There are no prime numbers ending in 5, except 5.

The digits can't add up to 3 except 3 (digital root).

Composite numbers: the numbers that has more than 2 factors.

Q3) Circle all the prime numbers

1   2   6   8   9   10   11   15   17   36   37

**Q4) a) Find the first three common multiples of 4 and 5.**

**Multiples of 4:** 4, 8, 12, 16, 20, 24, 28, 32, 36, 40

**Multiples of 5:** 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

**The first common multiple:** 20

**The first three common multiples:** 20, 40, 60,

**\*\*\*\*Important note: to find the first n common multiples first we list the first 10 multiples then we find the first common multiple and count by the first common multiple.**

**b) Find the first three common multiples of 3 and 7.**

**Multiples of 3:** 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

**Multiples of 7:** 7, 14, 21, 28, 35, 42, 49, 56, 63, 70

**The first common multiple:** 21

**The first three common multiples:** 21, 42, 63,

**c) Find the first three common multiples of 6 and 10.**

**Multiples of 6:** 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

**Multiples of 10:** 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

**The first common multiple:** 30

**The first three common multiples:**       ,       ,       ,