Stanground Academy

Mathematics Department

Year 9 Foundation

Home Learning Booklet – 18th May



Student’s Name:....................................................

Teacher:.................................................................

Log on to Mathswatch.

Your username is your school login@stanground

e.g. [jonet10.57@stanground](mailto:jonet10.57@stanground)

Your password is Maths1

Solving Equations

Watch the video on the hyperlink <https://vle.mathswatch.co.uk/vle/browse/297>, or find **clip 135** on MathsWatch as a reminder of how to answer the questions.

1) Solve 2x – 3 = 17

2) Solve 3x + 2 = 14

3) Solve 5x – 7 = 33

4) Solve 4x + 7 = 19

5) Solve x + x + x + x = 20

6) Solve x + 3x = 24

7) Solve 2(x + 3) = 8

8) Solve 2(3x – 4) = 22

9) Solve 5(t – 1) = 20

10) Solve 3(2x + 5) = 36

11) Solve 2x + 7 = x + 11

12) Solve 5y – 2 = 3y + 10

13) Solve 2x + 1 = 5x – 20

14) Solve p – 3 = 3p – 11

15) Solve 2d + 5 = 20 – 3d

16) Solve 4 – e = 2e – 8

17) Solve 2(x + 3) = x + 9

18) Solve x – 7 = 3(2x – 4)

19) Solve 5(x + 3) = 2(x + 6)

20) Solve 4(2y + 1) = 2(12 – y)

HCF and LCM

Watch the video on the hyperlink <https://vle.mathswatch.co.uk/vle/browse/756> or find **video N31b** on MathsWatch as a reminder of how to answer the questions.

1) Find the Highest Common Factor (HCF) of the following numbers.

a) 4 and 6

b) 8 and 16

c) 36 and 48

d) 300 and 525

e) 374 and 918

f) 45, 90 and 105

2) Find the Lowest Common Multiple (LCM) of the following numbers.

a) 8 and 12

b) 30 and 45

c) 15 and 18

d) 4, 6 and 8

e) 24 and 84

f) 72 and 96

3) The bells at Kings School ring every 6 minutes. At Queens School the bells ring every 5 minutes. At Princess School the bells ring every 9 minutes. All three bells ring together at 8.30 am. When is the next time the bells of the three schools will ring together?

Two Way Tables

Watch the video on the hyperlink <https://vle.mathswatch.co.uk/vle/browse/744> or find **video P4** on MathsWatch as a reminder of how to answer the questions.

1) 160 pupils in a school are asked to choose a new colour for the school tie. They can only choose from Blue, Green or Red. Some of the results are shown in this two-way table. Complete the table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Blue** | **Green** | **Red** | **TOTAL** |
| **Male** | 30 |  |  | 85 |
| **Female** |  |  | 14 |  |
| **TOTAL** | 65 |  | 42 | 160 |

2) A survey was done by a school to find out how people travel to the school. Altogether, 100 people were asked and the results can be seen below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Walk** | **Car** | **Cycle** | **Taxi** | **Bus** | **TOTAL** |
| **Male**  **Pupils** | 12 | 3 | 6 | 1 |  |  |
| **Female Pupils** |  | 1 | 5 |  | 6 | 20 |
| **Male Teachers** |  | 12 |  | 6 |  | 32 |
| **Female Teachers** | 4 |  | 2 | 7 | 2 | 23 |
| **TOTAL** | 25 |  | 19 | 20 | 12 | 100 |

a) Complete the two-way table.

b) How many people cycle to school?

c) How many female pupils go to school by taxi?

Sequences

Watch the video on the hyperlink <https://vle.mathswatch.co.uk/vle/browse/675> or find **video** **N12** on MathsWatch as a reminder of how to answer the questions.

For each number pattern:

a) Describe the pattern b) Work out what the next three terms are

(i) 2, 4, 6, 8, 10, 12, ...., ...., ....

(ii) 1, 4, 7, 10, 13, 16, ...., ...., ....

(iii) 5, 12, 19, 26, 33, 40, ...., ...., ....

(iv) -2, 3, 8, 13, 18, 23, ...., ...., ....

(v) 36, 33, 30, 27, 24, 21, ...., ...., ....

(vi) -12, -8, -4, 0, 4, 8, ...., ...., ....

(vii) 100, 91, 82, 73, 64, 55, ...., ...., ....

(viii) 7, 8.5, 10, 11.5, 13, 14.5, ...., ...., ....

2) For both of the following number patterns:

a) Describe the pattern b) Work out what the next three terms are

(i) 1, 4, 9, 16, 25, 36, ...., ...., ....

(ii) 1, 3, 6, 10, 15, 21, ...., ...., ....