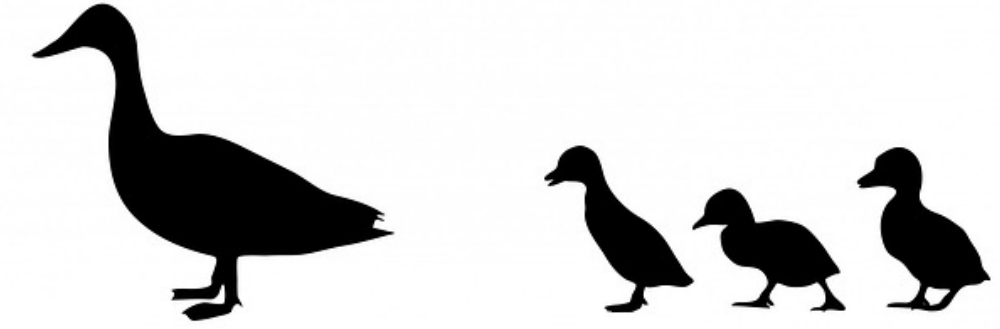# Examples

(a)   List all the **factors** of 12

(b)   List all the **factors** of 18

(c)   List all the **common factors** of 12 and 18

(d)   What is the **highest common factor** of 12 and 18?

(e)   List all the factors of 7

(f)   What is the **highest common factor** of 7 and 12?

Diagnostic

Is 16 a factor of 8?

(a)   Yes

(b)   No

Diagnostic

Is 8 a factor of 8?

(a)   Yes

(b)   No

Diagnostic

Is 4 a factor of 8?

(a)   Yes

(b)   No

Diagnostic

Is 24 a factor of 1?

(a)   Yes

(b)   No

Diagnostic

Is 1 a factor of 711?

(a)   Yes

(b)   No

Alpha Exercise 1

List all the factors of each of these numbers:

1)   1:   ____

2)   2:   ____ ____

3)   3:   ____ ____

4)   4:   ____ ____ ____

5)   8:   ____ ____ ____ ____

6)   15:   ____ ____ ____ ____

Alpha Exercise 2

List all the factors of each of these numbers:

1) 10: ___ ___ ___ ___

2) 6: ___ ___ ___ ___

3) 9: ___ ___ ___

4) 17: ___ ___

5) 12: ___ ___ ___ ___ ___ ___

6) 24: ___ ___ ___ ___ ___ ___ ___ ___

Beta Exercise 1

List all the factors of each of these numbers:

1) 36: ___ ___ ___ ___ ___ ___ ___ ___ ___

2) 45: ___ ___ ___ ___ ___ ___

3) 57: ___ ___ ___ ___

4) 43: ___ ___

5) 39: ___ ___ ___ ___

6) 84: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Beta Exercise 2

List all the factors of each of these numbers:

1)   18

2)   20

3)   27

4)   75

5)   63

6)   54

Gamma Exercise 1

Find the highest common factor of each of these pairs of numbers:

1)   4 and 18

2)   15 and 20

3)   9 and 27

4)   50 and 75

5)   18 and 63

6)   54 and 90

Gamma Exercise 2

Find the highest common factor of each of these sets of numbers:

1)   3 and 14

2)   25 and 15

3)   21, 35 and 42

4)   55 and 77

5)   10, 15 and 25

6)   210 and 525

Explain the mistake

Sophia writes:

28 is a factor of 7 because 7 goes 4 times into 28.

Sophia's sentence is incorrect. How would you correct it?

Exam-style question 1

(a) Write all the factors of 56.

(b) Find the highest common factor of 56 and 28.

(c) Find the highest common factor of 56, 28 and 21.

Exam-style question 2

The highest common factor of 42 and 105 is 21.

Write $\dfrac{42}{105}$ as a fraction in its simplest form.