# Oppgaver for kapittel 0

### 0.1.1

Calculate by writing the numbers as sums of ones, tens and hundreds, and applying the distributive law.

## Example

$$15 \cdot 3 = (10+5) \cdot 3 = 10 \cdot 3 + 5 \cdot 3 = 30 + 15 = 45$$

$$147 \cdot 2 = (100 + 40 + 7) \cdot 2 = 100 \cdot 2 + 40 \cdot 2 + 7 \cdot 2 = 200 \cdot 80 + 14 = 294$$

- a)  $17 \cdot 2$

- b)  $59 \cdot 3$  c)  $25 \cdot 4$  d)  $582 \cdot 2$  e)  $981 \cdot 3$

## 0.2.1

Write the numbers as a multiplication between two factors.

- a) 100
- b) 30
- c) 40
- d) 70

- e) 42
- f) 32
- g) 84
- h) 90

### 0.2.2

Prime factorize the numbers from Exercise 0.2.1.

Note: It is recommended that the reader find it's own ways of prime factorization, but those who insist on following a schematic method can look up Exercise 0.2.5.

#### 0.2.3

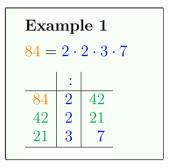
Factorize the numbers from Exercise 0.2.1 in three different ways.

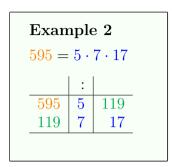
#### 0.2.4

6 is called a perfect number because the sum of it's factors 6 (including 1, but excluding 6) equals 6: 1 + 2 + 3 = 6. Find the next perfect number (it lies between 15 og 30).

## 0.2.5

The examples below shows a method for prime factorization of numbers. Explain the method.





# Gruble 1

Explain why the product of to odd numbers always equals an odd number.

## Gruble 2

Explain a method for checking if a number is a prime number.