```
boolean if
                                                                                                                                   sammenligningsoperatører false
                            true or false booleans
                                                                                                                       meaning
  values
                                                                                                                         equal
                                                                       if (x > y)
  literals
                         true false
                                                                                                                                                 3 != 2
                                                                                                                                                                     2
                                                                                                                                                                        != 2
                                                                                                                       not equal
operations
                     and
                                  or
                                             not
                                                            sequence
                                                                            int t = x;
                                                                                                      <
                                                                                                                                                 2 < 13
                                                                                                                                                                     2 < 2
                                                                                                                       less than
                                                           statements
                      &&
                                                                                 ť;
                                                                                                                                                 2 <= 2
operators
                                   П
                                                                                                                  less than or equal
                                                                            У
parse
                                                                                                                     greater than
                                                                                                                                                 13 > 2
                                                                                                                                                                     2 > 13
     int Integer.parseInt(String s)
                                                    convert s to an int value
                                                                                                                                                                     2 >= 3
 double Double.parseDouble(String s)
                                                                                                               greater than or equal
                                                                                                                                                 3 >= 2
                                                    convert s to a double value
         Long.parseLong(String s)
                                                    convert s to a long value
if og if-else
                                                                                                   non-negative discriminant?
                                                                                                                                              (b*b - 4.0*a*c) >= 0.0
              if (x < 0) x = -x;
  absolute value
              if (x > y)
                                                                                                                                                 (year % 100) == 0
                                                                                                      beginning of a century?
  but the smaller
                int t = x;
                                                                                                           legal month?
                                                                                                                                         (month >= 1) && (month <= 12)
  and the larger
                x = y;
y = t;
   value in y
                                                                                loops
             if (x > y) max = x;
else max = y;
                                                                                                           int power = 1;
                                                                                 compute the largest
   x and v
                                                                                                           while (power \ll n/2)
                                                                                     power of 2
                                                                                                               power = 2*power;
   error check
              less than or equal to n
  for division
                                                                                                           System.out.println(power);
   operation
              double discriminant = b*b - 4.0*c;
if (discriminant < 0.0)</pre>
                                                                                                           int sum = 0;
                                                                               compute a finite sum
                                                                                                           for (int i = 1; i <= n; i++)
                System.out.println("No real roots");
   error check
                                                                                  (1+2+...+n)
                                                                                                               sum += i;
                                                                                                           System.out.println(sum);
   formula
                System.out.println((-b + Math.sqrt(discriminant))/2.0); \\ System.out.println((-b - Math.sqrt(discriminant))/2.0); \\
                                                                                                           int product = 1;
  while loop initialization is a
                                                                                                           for (int i = 1; i <= n; i++)
                                                                              compute a finite product
                                                     loop-
                                                                              (n! = 1 \times 2 \times \ldots \times n)
                                                                                                               product *= i;
  separate statement
                                                continuation
                                                                                                           System.out.println(product);
                                                  condition
                      int power = 1;
                                                                                                           for (int i = 0; i <= n; i++)
    System.out.println(i + " " + 2*Math.PI*i/n);</pre>
                                                                                  print a table of
                                                                                  function values
                     while ( power <= n/2
    braces are
     optional
                                                                                                           String ruler = "1";
                            power = 2*power;
                                                                                                           for (int i = 2; i <= n; i++)
ruler = ruler + " " + i + " " + ruler;
   when body
                                                                             compute the ruler function
    is a single
                                                                                (see Program 1.2.1)
                                                                                                           System.out.println(ruler);
    statement
                                  body
                                                                                                                                                method
                                                                                                                                        return
                                                                                                                                                           argument argument
                                                                                                                   signature
  for loop
                                                                                                                                                                     variable
                                                                                                                                                             type
                                                                                                                                        type
                 declare and initialize
a loop control variable
  initialize another
variable in a
                                 loop-
ontinuation
condition
    variable in
separate
statement
                                                                                                                          public static double harmonic ( int n )
                                                                                                           funksjon
               for (int i = 0; i \leftarrow n; i++)
                                                                                                                              double sum = 0.0;
                                                                                                                    local
                                                                                                                              for (int i = 1; i <= n; i++);
                   System.out.println(i + " "
                                                + power);
                                                                                                                                  sum += 1.0/i;
                  power = 2*power;
                                                                                                                    body
                                                                                                                              return sum;
                                                                                                                           }
                                                                                                   funksjoner - eksempler
         class
                       public class Charge -
                                                                                                                  public static int abs(int x)
                                                                                                absolute value of an
                                                                                                                     if (x < 0) return -x;
                                                                                                    int value
                                                                                                                     else
                                                                                                                                return x;
                                                                          class
                           private final double rx, ry;
           variables
                          private final double q;
                                                                                                                  public static double abs(double x)
                                                                                                 absolute value of a
                          public Charge(double x0, double y0, double q0)
                                                                                                                     if (x < 0.0) return -x;
          constructor
                                                                                                  double value
                          \{ rx = x0; ry = y0; q = q0; \}
                                                                                                                     else
                                                                                                                                 return x:
                          public double potentialAt(double x, double y)
                                                                                                                  public static boolean isPrime(int n)
                                                                                                                     if (n < 2) return false;
for (int i = 2; i <= n/i; i++)
  if (n % i == 0) return false;
                                                                             variable
                              double k = 8.99e09:
                                                                                                  primality test
                                                                              names
                              double dx = x - rx;
                              double dy = y - ry;
                                                                                                                     return true;
                              return k * q / Math.sqrt(dx*dx + dy*dy),
            instance
                                                                                                                  public static double hypotenuse(double a, double b)
{    return Math.sqrt(a*a + b*b); }
                                                                                                   hypotenuse of
                                                                                                  a right triangle
                          public String toString()
{ return q +" at " + "("+ rx + ", " + ry +")";
                                                                                                                  public static double harmonic(int n)
                                                                                                                     double sum = 0.0;
for (int i = 1; i <= n; i++)
   sum += 1.0 / i;
                          public static void main(String[] args)
          test client
                                                                                                 harmonic number
                              double x = Double.parseDouble(args[0]);
                                                                                                                     return sum;
                              double y = Double.parseDouble(args[1]);
                create
                              Charge c1 = new Charge(0.51, 0.63, 21.3);
               and
initialize
                                                                                                                  public static int uniform(int n)
{ return (int) (Math.random() * n); }
                                                                                                 uniform random
                              Charge c2 = new Charge(0.13, 0.94, 81.9);
                                                                                                  integer in [0, n)
                object
                              double v1 = c1.potentialAt(x, y);
                                                                               invoke
                              double v2 = c2.potentialAt(x, y);
                                                                                                                  StdOut.prin\frac{1}{2}f(\%.2e\n'', (v1 + v2));
                                                                                                  draw a triangle
                                                                                                                     StdDraw.line(x0, y0, x1, y1);
                                     object
                       }
                                                                                                                     StdDraw.line(x1, y1, x2, y2);
StdDraw.line(x2, y2, x0, y0);
                                     name
                                                                       method
```