```
// -------------------------------------------------------------------------
p1
function
(
    bool is_prime receive ( int x )
    {
        declare (bool result = true);

        condition
        (
            if( x == 1 || (x % 2 == 0 && x != 2))
            {
                give (result <- false);
            }
            else
            {
                loop
                (
                    for ( declare (int d = 3); d * d <= x; increment (2))
                    {
                        condition
                        (
                            if( x % d == 0)
                            {
                                give (result <- false);
                            }
                        );
                    }
                );
            }
        );

        return ( result );
    }
);

main
(
    main noreceive
    {
        declare (int x);

        write ( "give x = " );
        read (x);

        declare (bool result);
        give (
                result <-
                    call (is_prime with (x))
            );
```

```
        write( "\nresult is {result}" );
    }
);

//---------------------------------------------------------------- p2


function
(
    int smallest_common_multiple receive ( int a, int b)
    {
        declare (int x = a), (int y = b);

        loop
        (
            while( x != y)
            {
                condition
                (
                    if( x > y)
                    {
                        give ( y <- y + b);
                    }
                    else
                    {
                        give ( x <- x + a);
                    }
                );
            }
        );
        return (x);
    }

);

main
(
    main noreceive
    {
        declare (int a), (int b);

        write ( "give a = " );
        read (a);
        write ( "give b = " );
        read (b);

        declare (int result);
        give (
                result <-
                    call (smallest_common_multiple with (a, b))
            );
```

```
            write( "\nresult is {result}" );
        }
    );


    // ------------------------------------------------------------------ p3

    function
    (
        noreturn print_sum receive ( array<int> list )
        {
            declare (int sumt = 0);

            loop
            (
                for( declare (int i = 0); i < length(list); increment 1)
                {
                    give (sum <- sum + list[i]);
                }
            );

            write ("sum is {sum}");
        }
    );

    main
    (
        main noreceive
        {
            declare (array<int> list);

            write ( "give list = " );
            read (list);

            call (print_sum with (x));
        }
    );

    // ------------------------------------------------------------ p1err

    function
    (
        noreturn print_sum ( array<int> list ) // did not specify "receive" for
    parameter
        {
            declare (int sumt = 0);

            loop
            (
                for( declare (int i = 0); i < length(list); increment 1)
                {
```

```
                    give (sum = sum + list[i]); // used = instead of <-
            }
        );

        write ("sum is {sum}");
    }
) // no ;


main noreceive  // did not specify if this is a function
{
    declare (array<int> list);

    write ( "give list = " );
    read (list);

    call (print_sum with (x));
}
```