# Worksheet

## Complex numbers

Exercise 1

Add and write the result in standard form.

Exercise 2

Add or subtract as indicated and write the result in standard form.

Exercise 3

Find each product and write the result in standard form.

Exercise 4

Find each product and write the result in standard form.

Exercise 5

Divide and express the result in standard form.

Exercise 6

Write the complex number in polar form.You may express the argument in

degrees or radians.

a) 1 b) 3*i* c) -2*i* d) -*i*

e) 6*i* f) -2 g) *i* h) -5*i*

Exercise 7

Write the complex number in polar form.You may express the argument in

degrees or radians.

a) 3 + i b) -3 - i c) 6 + 6i d) 6 - 6i

e) -6 + 8i f) 2,7 - 3,2i g) 1,8 + 0,52i

h) 2,7 -1,32i

Exercise 8

Find the product and quotient of the complex numbers. Leave answers in polar form.

a) z = 4(cos 70° + isin 70°) w = 2(cos 40° + isin 40°)

b) z = 8(cos 80° + isin 20°) w = 4(cos 80° + isin 20°)

c) z = 14(cos 3π/2 + isin3π/2) w = 7(cos 5π4 + isin 5π/4)

d) z = 15(cos 4π/3 + isin4π/3) w = 5[(cos (-60°) + isin(-60°)