

## Problem Card 1

There are two complex numbers  $(a + bi)$  and  $(c + di)$  whose product is an imaginary number. What are the two complex numbers?

## Data Card 1

- The product of the two numbers is  $34i$ .
- The real part of  $(a + bi)$  is 4.
- The imaginary part of  $(a + bi)$  is  $-i$ .

## Problem Card 2

There are two complex numbers  $(a + bi)$  and  $(c + di)$  whose product is a real number. What are the two complex numbers?

## Data Card 2

- The product of the two numbers is 12.
- The real part of  $(a + bi)$  is 2.
- The imaginary part of  $(c + di)$  is  $3i$ .

## Problem Card 3

There are two complex numbers  $(a + bi)$  and  $(c + di)$  whose sum is a complex number with both real and imaginary parts. What are the two complex numbers?

## Data Card 3

- The sum of the two numbers is  $-2 + 5i$ .
- The real part of  $(a + bi)$  is 4.
- The imaginary part of  $(c + di)$  is  $-5i$ .

## Problem Card 4

There are two complex numbers  $(a + bi)$  and  $(c + di)$  whose difference is a complex number with both real and imaginary parts. What are the two complex numbers?

## Data Card 4

- The sum of the two numbers is  $7 - i$ .
- The real part of  $(a + bi)$  is  $-6$ .
- The imaginary part of  $(c + di)$  is  $9i$ .