

# De Moivre's Theorem

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### Question 1 (3)

Use De Moivre's Theorem to express  $\cos(3x)$  as a polynomial in  $\cos(x)$ .

### Question 2 (3)

Use De Moivre's Theorem to express  $\sin(3x)$  as a polynomial in  $\sin(x)$  and  $\cos(x)$ .

### Question 3 (3)

Use De Moivre's Theorem to express  $\cos(4x)$  as a polynomial in  $\cos(x)$ .

### Question 4 (3)

Use De Moivre's Theorem to express  $\sin(4x)$  as a polynomial in  $\sin(x)$  and  $\cos(x)$ .

### Question 5 (4)

Use De Moivre's Theorem to express  $\cos(5x)$  as a polynomial in  $\cos(x)$ .

### Question 6 (4)

Use De Moivre's Theorem to express  $\sin(5x)$  as a polynomial in  $\sin(x)$  and  $\cos(x)$ .

### Question 7 (4)

Express  $\cos(6x)$  as a polynomial in  $\cos(x)$  using De Moivre's Theorem.

### Question 8 (4)

Express  $\sin(6x)$  as a polynomial in  $\sin(x)$  and  $\cos(x)$  using De Moivre's Theorem.

### Question 9 (5)

Express  $\cos(7x)$  as a polynomial in  $\cos(x)$  using De Moivre's Theorem.

### Question 10 (5)

Express  $\sin(7x)$  as a polynomial in  $\sin(x)$  and  $\cos(x)$  using De Moivre's Theorem.