Find the modulus $|z|$ of $z = 8 - 15i$.

Find the argument θ of $z = 3\sqrt{3} - 3i$.

Write $z = 3\sqrt{2}(\cos 225° + i \sin 225°)$ in the form $a + bi$.

Use De Moivre's Theorem to write $[2(\cos 105° + i \sin 105°)]^6$ in the form $a + bi$.

Write $z = 6(\cos 90° + i \sin 90°)$ in the form $a + bi$.

Write $z = 3\sqrt{2}(\cos 315° + i \sin 315°)$ in the form $a + bi$.

Find the argument θ of $z = -3\sqrt{3} + 3i$.

Use De Moivre's Theorem to write $(\cos 150° + i \sin 150°)^6$ in the form $a + bi$.

Complex Numbers in Polar Form & De Moivre's Theorem · 2

ANSWER

330°

Complex Numbers in Polar Form & De Moivre's Theorem · 1

ANSWER

17

Complex Numbers in Polar Form & De Moivre's Theorem · 4

ANSWER

-64i

Complex Numbers in Polar Form & De Moivre's Theorem · 3

ANSWER

-3 - 3i

Complex Numbers in Polar Form & De Moivre's Theorem · 6

ANSWER

3 - 3i

Complex Numbers in Polar Form & De Moivre's Theorem · 5

ANSWER

6i

Complex Numbers in Polar Form & De Moivre's Theorem · 8

ANSWER

-1

Complex Numbers in Polar Form & De Moivre's Theorem · 7

ANSWER

150°

Find the argument θ of $z = 2\sqrt{3} - 2i$.

Write $z = 8(\cos 150° + i \sin 150°)$ in the form a + bi.

Use De Moivre's Theorem to write $(\cos 135° + i \sin 135°)^4$ in the form a + bi.

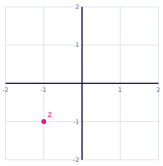
$z_1 = 2(\cos 125° + i \sin 125°)$ and $z_2 = 5(\cos 50° + i \sin 50°)$. Find the modulus of $z_1 z_2$.

Let $w = [2(\cos 85° + i \sin 85°)]^6 = R(\cos \alpha + i \sin \alpha)$ with $0° \le \alpha < 360°$. Find α.

Write $z = 5\sqrt{2}(\cos 225° + i \sin 225°)$ in the form a + bi.

Let $w = [3(\cos 100° + i \sin 100°)]^5 = R(\cos \alpha + i \sin \alpha)$ with $0° \le \alpha < 360°$. Find α.

Find the argument θ of $z = -1 - i$.



Complex Numbers in Polar Form & De Moivre's Theorem · 10

ANSWER

$-4\sqrt{3} + 4i$

Complex Numbers in Polar Form & De Moivre's Theorem · 9

ANSWER

$330°$

Complex Numbers in Polar Form & De Moivre's Theorem · 12

ANSWER

10

Complex Numbers in Polar Form & De Moivre's Theorem · 11

ANSWER

-1

Complex Numbers in Polar Form & De Moivre's Theorem · 14

ANSWER

$-5 - 5i$

Complex Numbers in Polar Form & De Moivre's Theorem · 13

ANSWER

$150°$

Complex Numbers in Polar Form & De Moivre's Theorem · 16

ANSWER

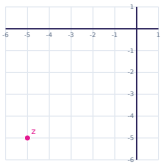
$225°$

Complex Numbers in Polar Form & De Moivre's Theorem · 15

ANSWER

$140°$

Find the argument θ of $z = -5 - 5i$.



$z_1 = 18(\cos 285° + i \sin 285°)$ and $z_2 = 6(\cos 110° + i \sin 110°)$. Find the argument of z_1/z_2 $(0° \le \theta < 360°)$.

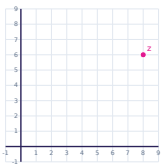
Let $w = [2(\cos 125° + i \sin 125°)]^4 = R(\cos \alpha + i \sin \alpha)$ with $0° \le \alpha < 360°$. Find α.

Write $z = 4(\cos 180° + i \sin 180°)$ in the form $a + bi$.

$z_1 = 3(\cos 60° + i \sin 60°)$ and $z_2 = 3(\cos 240° + i \sin 240°)$. Find the argument of $z_1 z_2$ $(0° \le \theta < 360°)$.

Find the argument θ of $z = 2\sqrt{3} + 2i$.

Find the modulus $|z|$ of $z = 8 + 6i$.



Find the argument θ of $z = -2\sqrt{3} - 2i$.

Complex Numbers in Polar Form & De Moivre's Theorem · 18

ANSWER

175°

Complex Numbers in Polar Form & De Moivre's Theorem · 17

ANSWER

225°

Complex Numbers in Polar Form & De Moivre's Theorem · 20

ANSWER

-4

Complex Numbers in Polar Form & De Moivre's Theorem · 19

ANSWER

140°

Complex Numbers in Polar Form & De Moivre's Theorem · 22

ANSWER

30°

Complex Numbers in Polar Form & De Moivre's Theorem · 21

ANSWER

300°

Complex Numbers in Polar Form & De Moivre's Theorem · 24

ANSWER

210°

Complex Numbers in Polar Form & De Moivre's Theorem · 23

ANSWER

10