Task card 1 Complex Numbers in Polar Form & De...

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

Task card 2 Complex Numbers in Polar Form & De...

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

Task card 3 Complex Numbers in Polar Form & De...

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

Task card 4 Complex Numbers in Polar Form & De...

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

Task card 5 Complex Numbers in Polar Form & De...

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

Task card 6 Complex Numbers in Polar Form & De...

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

Task card 7 Complex Numbers in Polar Form & De...

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

Task card 8 Complex Numbers in Polar Form & De...

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

Task card 9 Complex Numbers in Polar Form & De...

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

Task card 10 Complex Numbers in Polar Form & De...

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

Task card 11 Complex Numbers in Polar Form & De...

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

Task card 12 Complex Numbers in Polar Form & De...

$z_1 = 2(\cos 125° + i \sin 125°)$ and $z_2 = 5(\cos 50° + i \sin 50°)$. Find the modulus of z_1z_2.

Task card 13 Complex Numbers in Polar Form & De...

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

Task card 14 Complex Numbers in Polar Form & De...

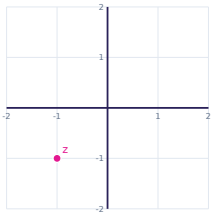
Write $z = 5\sqrt{2}(\cos 225° + i \sin 225°)$ in the form $a + bi$.

Task card 15 Complex Numbers in Polar Form & De...

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

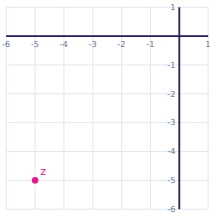
Task card 16 Complex Numbers in Polar Form & De...

Find the argument θ of $z = -1 - i$.



Task card 17 Complex Numbers in Polar Form & De...

Find the argument θ of $z = -5 - 5i$.



Task card 18 Complex Numbers in Polar Form & De...

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

Task card 19 Complex Numbers in Polar Form & De...

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

Task card 20 Complex Numbers in Polar Form & De...

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

Task card 21 Complex Numbers in Polar Form & De...

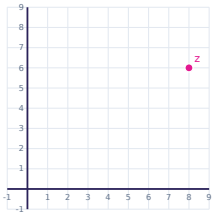
$z_1 = 3(\cos 60° + i \sin 60°)$ and $z_2 = 3(\cos 240° + i \sin 240°)$. Find the argument of $z_1 z_2$ ($0° \le \theta < 360°$).

Task card 22 Complex Numbers in Polar Form & De...

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

Task card 23 Complex Numbers in Polar Form & De...

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



Task card 24 Complex Numbers in Polar Form & De...

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

Complex Numbers in Polar Form & De Moivre's Theorem Task Cards

Recording sheet · Grade 12 · Give exact answers. Write complex numbers as a + bi (like -2√3 + 2i) and arguments in degrees with 0° ≤ θ < 360°.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Complex Numbers in Polar Form & De Moivre's Theorem Task Cards: Answer Key

Grade 12 · Medium

The answers online

1. 17	**2.** 330°	**3.** -3 - 3i
4. -64i	**5.** 6i	**6.** 3 - 3i
7. 150°	**8.** -1	**9.** 330°
10. -4√3 + 4i	**11.** -1	**12.** 10
13. 150°	**14.** -5 - 5i	**15.** 140°
16. 225°	**17.** 225°	**18.** 175°
19. 140°	**20.** -4	**21.** 300°
22. 30°	**23.** 10	**24.** 210°