mobius

Math worksheet on *'Complex Numbers - Rectangular Form to Polar Form (Radians) (Level 1)'*. Part of a broader unit on *'Complex Numbers'*

Learn online: app.mobius.academy/math/units/complex_numbers/

1 Find the polar form in radians of this complex number

$$3 + 5i$$

a $6.1(cos(2\pi\ rad) + i \cdot sin(2\pi\ rad))$

b $7.4(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

c $5.2(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

d $5.8(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

e $5.1(cos(2\pi\ rad) + i \cdot sin(2\pi\ rad))$

f $4.2(cos(0.2\pi\ rad) + i \cdot sin(0.2\pi\ rad))$

2 Find the polar form in radians of this complex number

$$2 + 2i$$

a $2(cos(2\pi\ rad) + i \cdot sin(2\pi\ rad))$

b $1.2(cos(1.3\pi\ rad) + i \cdot sin(1.3\pi\ rad))$

c $2.3(cos(1\frac{2}{3}\pi\ rad) + i \cdot sin(1\frac{2}{3}\pi\ rad))$

d $1.2(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$

e $2(cos(\frac{1}{6}\pi\ rad) + i \cdot sin(\frac{1}{6}\pi\ rad))$

f $2.8(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

3 Find the polar form in radians of this complex number

$$4 + 2i$$

a $5.7(cos(0.2\pi\ rad) + i \cdot sin(0.2\pi\ rad))$

b $4.5(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

c $7.9(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

d $5.8(cos(\frac{1}{3}\pi\ rad) + i \cdot sin(\frac{1}{3}\pi\ rad))$

e $7.1(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

f $6.3(cos(\frac{2}{9}\pi\ rad) + i \cdot sin(\frac{2}{9}\pi\ rad))$

4 Find the polar form in radians of this complex number

$$-3 - 4i$$

a $5.7(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$

b $6.4(cos(1.3\pi\ rad) + i \cdot sin(1.3\pi\ rad))$

c $7.6(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$

d $6.3(cos(1.4\pi\ rad) + i \cdot sin(1.4\pi\ rad))$

e $8.1(cos(1\frac{2}{3}\pi\ rad) + i \cdot sin(1\frac{2}{3}\pi\ rad))$

f $5(cos(1.3\pi\ rad) + i \cdot sin(1.3\pi\ rad))$

5 Find the polar form in radians of this complex number

$$-5 + 2i$$

a $10.1(cos(0.2\pi\ rad) + i \cdot sin(0.2\pi\ rad))$

b $6(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

c $5.8(cos(0.2\pi\ rad) + i \cdot sin(0.2\pi\ rad))$

d $8.2(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

e $10.8(cos(0.2\pi\ rad) + i \cdot sin(0.2\pi\ rad))$

f $5.4(cos(0.9\pi\ rad) + i \cdot sin(0.9\pi\ rad))$

6 Find the polar form in radians of this complex number

$$5 + 2i$$

a $4.5(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

b $5.4(cos(0.1\pi\ rad) + i \cdot sin(0.1\pi\ rad))$

c $4.5(cos(1.9\pi\ rad) + i \cdot sin(1.9\pi\ rad))$

d $7.4(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$

e $4(cos(2\pi\ rad) + i \cdot sin(2\pi\ rad))$

f $4.9(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$

7 Find the polar form in radians of this complex number

$$3 - 5i$$

a $10.2(cos(0.4\pi\ rad) + i \cdot sin(0.4\pi\ rad))$

b $8(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

c $11.4(cos(1.6\pi\ rad) + i \cdot sin(1.6\pi\ rad))$

d $10(cos(1.6\pi\ rad) + i \cdot sin(1.6\pi\ rad))$

e $10(cos(0.3\pi\ rad) + i \cdot sin(0.3\pi\ rad))$

f $5.8(cos(1.7\pi\ rad) + i \cdot sin(1.7\pi\ rad))$