



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

Learn online: [app.mobius.academy/math/units/complex\\_numbers/](http://app.mobius.academy/math/units/complex_numbers/)

1 Find the exponential form in radians of this complex number

$$-5 - 5i$$

a	b
$7.8e^{1\frac{5}{18}\pi i}$	$7.1e^{1.3\pi i}$
c	d
$10.6e^{1.3\pi i}$	$12.8e^{1.3\pi i}$
e	f
$5e^{1.3\pi i}$	$12.8e^{1.2\pi i}$

2 Find the exponential form in radians of this complex number

$$4 + 4i$$

a	b	c
$4.1e^{0.1\pi i}$	$6.3e^{0.6\pi i}$	$5.7e^{0.3\pi i}$
d	e	f
$6.4e^{1.8\pi i}$	$5e^{1.8\pi i}$	$7.8e^{\frac{13}{18}\pi i}$

3 Find the exponential form in radians of this complex number

$$-4 - 5i$$

a	b	c
$6.4e^{0.7\pi i}$	$10e^{1.3\pi i}$	$8.9e^{1.4\pi i}$
d	e	f
$8.1e^{1\frac{1}{3}\pi i}$	$8.1e^{\frac{1}{3}\pi i}$	$6.4e^{1.3\pi i}$

4 Find the exponential form in radians of this complex number

$$-4 + 3i$$

a	b	c
$7.6e^{1.1\pi i}$	$9.8e^{1.1\pi i}$	$8.5e^{1\frac{1}{9}\pi i}$
d	e	f
$7.2e^{1.2\pi i}$	$5e^{0.8\pi i}$	$4.2e^{1.3\pi i}$

5 Find the exponential form in radians of this complex number

$$4 + 3i$$

a	b	c
$5.8e^{1.8\pi i}$	$8e^{2\pi i}$	$5e^{2\pi i}$
d	e	f
$5e^{0.2\pi i}$	$9e^{2\pi i}$	$4.2e^{0.3\pi i}$

6 Find the exponential form in radians of this complex number

$$-4 + 5i$$

a	b	c
$7.3e^{0.4\pi i}$	$4.1e^{0.4\pi i}$	$6.4e^{0.7\pi i}$
d	e	f
$6.3e^{0.6\pi i}$	$8.1e^{0.5\pi i}$	$7.8e^{\frac{13}{18}\pi i}$

7 Find the exponential form in radians of this complex number

$$-6 - 6i$$

a	b	c
$8.5e^{1\frac{7}{18}\pi i}$	$9.1e^{1.5\pi i}$	$8.1e^{1.5\pi i}$
d	e	f
$8.9e^{1.4\pi i}$	$7.2e^{1.3\pi i}$	$8.5e^{1.3\pi i}$