Math worksheet on *'Complex Numbers - Rewriting Roots (Level 3)'*. Part of a broader unit on *'Complex Numbers'*

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

1 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-125y}$

a	b	c
$5i\sqrt{2y^2}$	$5i\sqrt{6y^3}$	$i\sqrt{8y}$
d	**e**	**f**
$5i\sqrt{5y}$	$4i\sqrt{6y}$	$7i\sqrt{y}$

2 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-20p^4}$

a	b	c
$2p^2i\sqrt{5}$	$pi\sqrt{6}$	$3p^2i\sqrt{3}$
d	**e**	**f**
$2p^4i\sqrt{8}$	$pi\sqrt{4}$	$p^2i\sqrt{2}$

3 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-80p^2}$

a	b	c
$3pi$	$4pi\sqrt{5}$	$2pi\sqrt{4}$
d	**e**	**f**
$3pi\sqrt{6}$	$p^3i\sqrt{4}$	$2pi$

4 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-175m}$

a	b	c	d	e	f
$3i\sqrt{4m}$	$4i\sqrt{4m^2}$	$5i\sqrt{7m}$	$8i\sqrt{9m}$	$3i\sqrt{10m}$	$i\sqrt{9m}$

5 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-112x^4}$

a	b	c	d	e	f
$2xi\sqrt{6}$	$3x^3i\sqrt{4}$	$2xi\sqrt{4}$	$4x^4i\sqrt{4}$	$4x^2i\sqrt{7}$	$2x^4i\sqrt{4}$

6 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-63y}$

a	b	c
$3i\sqrt{7y}$	$3i\sqrt{9y}$	$6i\sqrt{7y}$
d	**e**	**f**
$4i\sqrt{6y}$	$5i\sqrt{4y^3}$	$5i\sqrt{7y}$

7 Rewrite the root as a complex number and simplify all radicals

$\sqrt{-32d^3}$

a	b	c
$5d^3i\sqrt{d}$	$3di\sqrt{2d}$	$7d^2i\sqrt{d^3}$
d	**e**	**f**
$6d^3i\sqrt{2d}$	$4di\sqrt{2d}$	$4d^3i\sqrt{d}$