Roots and Indices Maze

Can you find the route to the opposite side of the table?

- Begin in the highlighted box
- Move horizontally or vertically one box at a time… no diagonal moves allowed!
- You may only land on boxes which are equivalent in value to the highlighted one

$2^6 \times 2^3$	$3^2 \times 2^3$	$(\sqrt{16})^2$	$(2^3)^3$	$8^3 \div 8$	$4^4 \times 4^{-3}$	$(\sqrt[3]{8})^4$	8×4^2
$\sqrt{8^3}$	$(2^3)^2$	$8^7 \times 8^{-5}$	4^3	$2^{-2} \times 2^7$	64^0	$2^5 \times 2^3$	$4^7 \div 2^3$
$(\sqrt{64})^3$	8^2	$2^2 \times 2^3$	$2^3 \times 2^3$	$(2^3)^3$	$(\sqrt[3]{8})^6$	$4^6 \times 4^{-3}$	$2^2 \times 4^2$
2^6	$(\sqrt{64})^2$	$4^6 \times 4^{-2}$	$(\sqrt{16})^3$	$(2^2)^4$	$8^3 \div 2^3$	$2^{-3} \times 2^7$	$(2^2)^4$
3^5	$2^6 \times 2^1$	8^3	$4^5 \div 2^4$	$(-4)^{-3}$	$(2^2)^3$	$(\sqrt{8})^3$	$4^6 \div 2^6$
$4^3 \times 4^{-3}$	$(2^5)^1$	$(\sqrt[3]{64})^2$	$2^3 \times 8$	$2^{-1} \times 2^7$	$(\frac{1}{4})^{-3}$	16^2	64

Hint: What is the value of 2^6

Roots and Indices Maze

Solution on the next slide….

Roots and Indices Maze

Did you find the route to the opposite side of the table?

$2^6 \times 2^3$	$3^2 \times 2^3$	$(\sqrt{16})^2$	$(2^3)^3$	$8^3 \div 8$	$4^4 \times 4^{-3}$	$(\sqrt[3]{8})^4$	8×4^2
$\sqrt{8^3}$	$(2^3)^2$	$8^7 \times 8^{-5}$	4^3	$2^{-2} \times 2^7$	64^0	$2^5 \times 2^3$	$4^7 \div 2^3$
$(\sqrt{64})^3$	8^2	$2^2 \times 2^3$	$2^3 \times 2^3$	$(2^3)^3$	$(\sqrt[3]{8})^6$	$4^6 \times 4^{-3}$	$2^2 \times 4^2$
2^6	$(\sqrt{64})^2$	$4^6 \times 4^{-2}$	$(\sqrt{16})^3$	$(2^2)^4$	$8^3 \div 2^3$	$2^{-3} \times 2^7$	$(2^2)^4$
3^5	$2^6 \times 2^1$	8^3	$4^5 \div 2^4$	$(-4)^{-3}$	$(2^2)^3$	$(\sqrt{8})^3$	$4^6 \div 2^6$
$4^3 \times 4^{-3}$	$(2^5)^1$	$(\sqrt[3]{64})^2$	$2^3 \times 8$	$2^{-1} \times 2^7$	$(\frac{1}{4})^{-3}$	16^2	64

Matching Pairs

Match each of the expressions with their simplified version

$\left(\frac{9}{16}\right)^{\frac{1}{2}}$

$(4)^{\frac{3}{2}}$

$(-5)^{-2}$

$(16)^{-\frac{3}{2}}$

$\frac{1}{4}$

$\frac{3}{4}$

$\frac{3}{2}$

$\frac{1}{8}$

$\frac{1}{25}$

8

$\frac{1}{64}$

$\frac{1}{16}$

2^{-3}

$64^{-\frac{1}{3}}$

$\left(\frac{4}{9}\right)^{-\frac{1}{2}}$

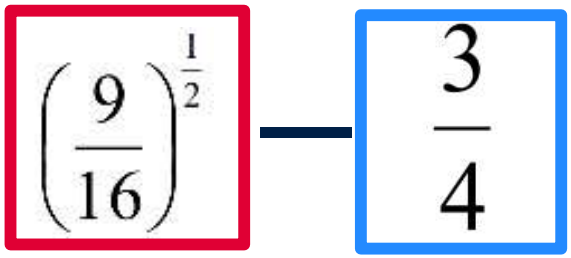
4^{-2}

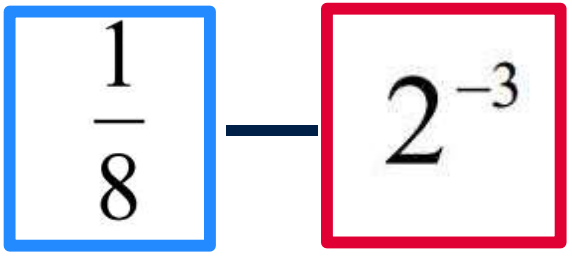
Matching Pairs

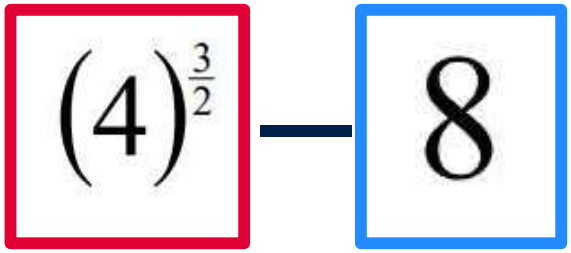
Solution on the next slide….

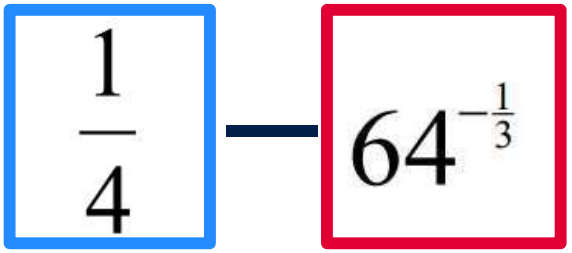
Matching Pairs

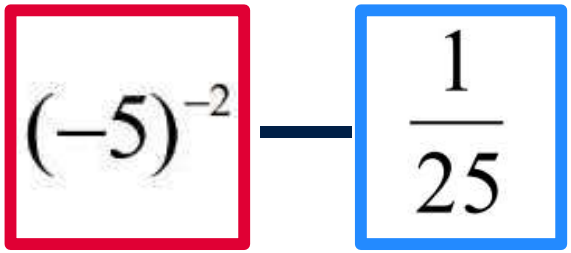
Solution

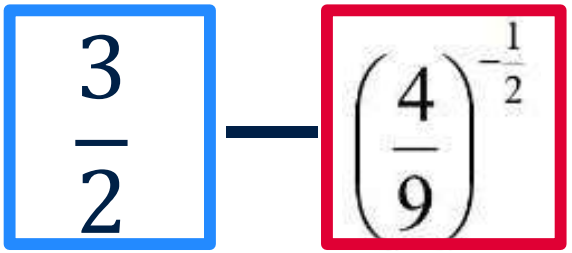


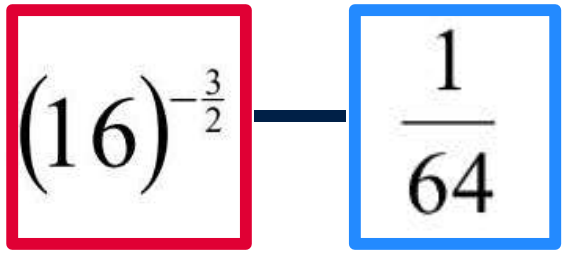


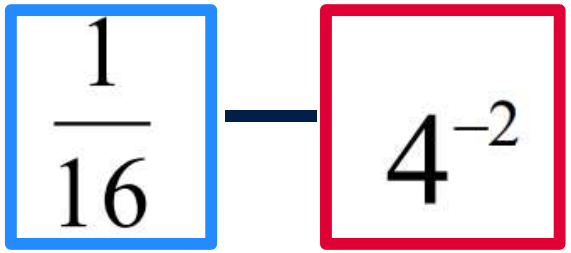












Where does it belong?

Five numbers are arranged in order from least to greatest

$$x\ ,x^3,x^4,x^2,x^0$$

Where does $-x^{-1}$ belong in the list above?

Hint

Solution