

Odd One Out

Preparation:

- Photocopy the sheets below.
- Arrange the students in pairs or small groups.
- Give each group the whole sheet or cut the sheets into strips and distribute the strips amongst the groups.

The Activity

- Each strip has two equivalent statements and an odd one out.
- Students identify the odd one out.
- In the empty box students then write an expression using indices that is equivalent to the odd one out.

Some of these are straight forward but others are more complex and involve algebraic indices.

Students could complete as many strips as possible, setting aside strips which they find difficult.

Discussion can focus on the variations that have been chosen for the expression to match the odd one out and those questions which proved more challenging.

Students could also be asked to make up their own challenge to set the class.

3^2	$9^{\frac{1}{2}}$	$27^{\frac{2}{3}}$	
$4^{-\frac{1}{2}}$	2^{-2}	$\frac{1}{4}$	
$8^{\frac{1}{2}}$	$2^{\frac{3}{2}}$	$16^{\frac{1}{4}}$	
$4^{\frac{3}{4}}$	$8^{\frac{1}{4}}$	$2^{\frac{3}{2}}$	
3^{-1}	9^{-2}	$27^{-\frac{1}{3}}$	

2^{3x}	8^x	4^{2x}	
3^{3x}	9^{2x}	27^x	
2^{2x}	$4^{\frac{x}{2}}$	$8^{\frac{x}{3}}$	