

GROUPWORK

Consider the following dozen infinite sets comparisons. Write down $>$, $<$ or $=$ between each pair of sets to indicate their relative size.

	SET #1		SET #2
1:	$\{1, 2, 3, 4, \dots\}$ [all natural numbers]	$=$	[The natural numbers starting with 3] $\{3, 4, 5, 6, \dots\}$
2:	$\{1, 2, 3, 4, \dots\}$ [all natural numbers]	$=$	[All even natural numbers] $\{2, 4, 6, 8, \dots\}$
3:	$\{1, 2, 3, 4, \dots\}$ [all natural numbers]	$=$	[All odd natural numbers] $\{1, 3, 5, 7, \dots\}$
4:	$\{1, 2, 3, 4, \dots\}$ [all natural numbers]	$=$	[All unit fractions] $\{1, 1/2, 1/3, 1/4, \dots\}$
5:	$\{1, 2, 3, 4, \dots\}$ [all natural numbers]	$<$	[All points on an infinite line]
6:	[All points on a finite line segment]	$=$	[All points on an infinite line]
7:	$\{1, 3, 5, 7, \dots\}$ [all odd natural numbers]	$=$	[All multiples of four] $\{4, 8, 12, 16, \dots\}$
8:	$\{10, 20, 30, 40, \dots\}$ [all multiples of 10]	$=$	[All multiples of four] $\{4, 8, 12, 16, \dots\}$
9:	[All points on an infinite line]	$=$	[All points on a line 1" long]
10:	[All points inside a unit circle]	$=$	[All points on the circumference of a unit circle]
11:	[All points inside a unit circle]	$=$	[All points inside a unit square]
12:	[All points on a line 1/2" long]	$=$	[All points on a line 1" long]