



Problem of the Week

Problem C

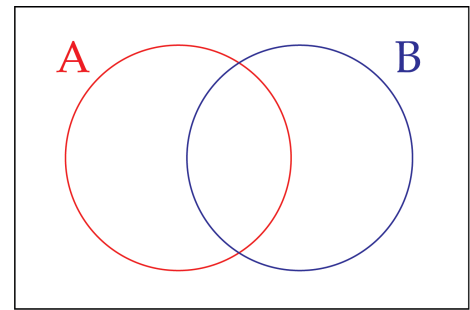
Everything in its Place 1

- (a) A Venn diagram has two circles, labelled A and B. Each circle contains integers that satisfy the following criteria.

A: Less than $-\frac{7}{6}$

B: Greater than $-\frac{1}{4}$

The overlapping region in the middle contains integers that are in both A and B, and the region outside both circles contains integers that are neither in A nor B.



In total this Venn diagram has four regions. Place integers in as many of the regions as you can. Is it possible to find an integer for each region?

- (b) A Venn diagram has three circles, labelled A, B, and C. Each circle contains pairs of integers that satisfy the following criteria.

A: Their sum is negative

B: Their product is negative

C: Their difference is even

In total this Venn diagram has eight regions. Place pairs of integers in as many of the regions as you can. Is it possible to find a pair of integers for each region?

