Problem of the Week

Problem A

Party Pattern

Students at Dryden Elementary School are hanging decorations for an end of year celebration. They have a variety of decorations available in different shapes and colours. The shapes are: circles, stars, hearts, and diamonds. Each shape comes in three colours: red, blue, and yellow. The students create a fun pattern that repeats in both colour and shape.

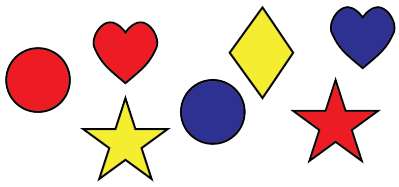
- The colour pattern repeats in the order: red, blue, yellow.
- The shape pattern repeats in the order: circle, star, heart, diamond.

They hang decorations following both of these patterns.

(a) If they start with a red circle, what will be the colour and shape of the 10^{th} decoration?

(b) If the students hang 24 decorations, how many of each colour and each shape will they hang?

(c) How many of each colour and each shape will they need if they hang 240 decorations? Justify your answer.



Theme: Algebra