

## Mixtures Exploration Questions

1. You have 2 piles of circles. In the first pile there are 20 circles with 7 colored in. In the second pile there are 10 circles. How many circles in the second pile need to be colored in order to have 43.33% of the circles be colored in when both piles are combined?
2. You have one pile of 45 circles, 31 of them are colored. Create a second pile of circles, when this pile of circles stands alone 42.5% of the circles should be colored, and when you combine it with the first pile 56.47% of the total pile should be colored. How many circles are in the second pile and how many of them are colored?
3. You have pile of 15 circles, 12 of them are colored. Create another pile of circles that when added to the first pile, makes a combined pile with 65% - 66% of the total number of circles colored. How many circles are in the second pile? How many circles in the second pile are colored?
4. Pick a question from questions 1-3, state what type of problem it is ("unknown percent", "unknown total", or "unknown pile"), and generalize how you got your answer for that type of question.