AMDM: Unit 1 – Calculating Probabilities **Name:** Key

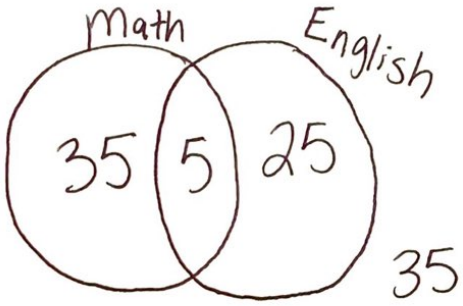
1.2: Tree Diagrams & Venn Diagrams **Date** _____

Venn Diagrams

Draw a Venn diagram for the following scenario:

There are 100 students in the 6th grade. 40 are taking Math. 30 are taking English. 5 take both Math and English.

1. P(students is in math and English)
2. P(student in math)
3. P(student in English only)
4. P(student is in neither subject)



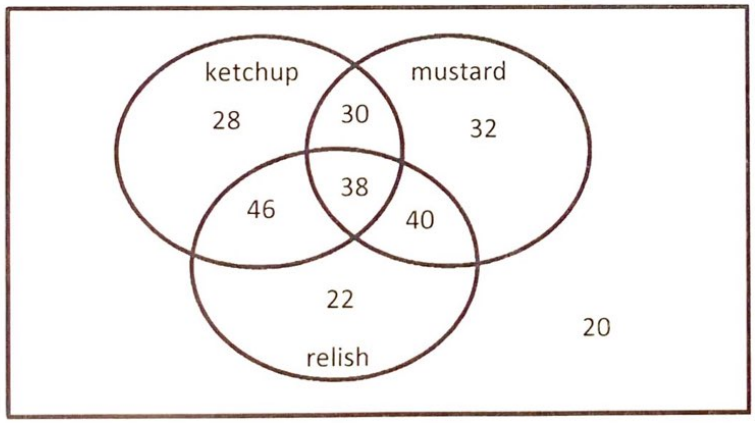
1) $\frac{5}{100} = \frac{1}{20}$

2) $\frac{40}{100} = \frac{2}{5}$

3) $\frac{25}{100} = \frac{1}{4}$

4) $\frac{35}{100} = \frac{7}{20}$

Superburger sells burgers with a choice of ketchup, mustard, or relish. One day they sold 256 burgers. The results are shown below.



1. P(burger had ketchup) $\frac{142}{256} = \frac{71}{128}$
2. P(burger ketchup and relish) $\frac{84}{256} = \frac{21}{64}$
3. P(burger did not have mustard) $\frac{116}{256} = \frac{29}{64}$
4. P(burger had mustard or relish) $\frac{208}{256} = \frac{13}{16}$
5. P(burger had ketchup, given that it already had mustard) $\frac{140}{256} = \frac{35}{64}$ tell me why this is incorrect...