**AMDM: Unit 1 – Calculating Probabilities Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**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)

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

mustardketchup

ketchup

30

28

32

38

40

46

22

20

relish

1. P(burger had ketchup)
2. P(burger ketchup and relish)
3. P(burger did not have mustard)
4. P(burger had mustard or relish)
5. P(burger had ketchup, given that it already had mustard)

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**1.2: Tree Diagrams & Venn Diagrams Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Tree Diagrams**

You go to a restaurant where you are able to create your own Pizza. In the table below, create your own options:

|  |  |  |
| --- | --- | --- |
| Crust | Size | 1 Topping |
| Thin | Medium | Pepperoni |
| Stuffed | Large | Cheese |
|  | X-Large | Buffalo chicken |
|  |  |  |

1. Create a tree diagram illustrating all the possible pizzas that can be made.

2. Answer the following probability questions using your weighted tree diagram:

P(thin, medium, cheese)

P(stuffed, large, pepperoni)

P(thin, X-large, buffalo chicken)

P(thin, large, pepperoni or cheese)

P(stuffed, X-large, cheese or buffalo chicken)