Name:

Culinary Arts 1, 15 points possible

**Culinary Math Practice**

**Part 1: Converting Recipes**

|  |  |  |
| --- | --- | --- |
| **Equations Being Used** | | |
| Desired Amount = **Conversion Factor**  Original Amount | Conversion Factor x Original Amount = **Desired Amount** | **Use your EQUIVALENTS!!!** |

**Use the recipe provided to convert the recipe into various yields** (one-half batch, one-quarter batch, triple batch) **to complete the chart below.**

**Pizza Sauce:** (1 x = 1 batch)  **Yield:** 20 pizzas (12” each) **Portion Size:** 10 oz (volume)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Original Recipe**  **Total Yield** | **1/2x** | **1/3x** | **1/4x** | **1/10 x** |
| **Total yield in oz** | **\_\_\_\_\_\_\_\_ oz *or* \_\_\_\_\_\_\_ lb**  (Hint: Yield x Portion Size) |  |  | 50 oz ***or***  3.13 lb |  |
| **How many 12” pizzas can be prepared?** | 20 ct |  | 6.67 ct |  |  |
| **Ingredient** | **Original Amount (1x)** | **1/2x** | **1/3x** | **1/4x** | **1/10 x** |
| **Whole butter** | 8 oz |  | 2.7 oz |  |  |
| **Olive oil** | 12 fl oz | 6 fl oz ***or*** ¾ c |  |  |  |
| **Onions, diced** | 52 oz |  |  | 13 oz |  |
| **Garlic powder** | 2 T |  | **\_\_\_\_ t** |  | .2 T |
| **Italian seasoning** | 4 T |  | 1 T 1 t |  |  |
| **Kosher salt** | 2 T |  | 2 t |  |  |
| **Sugar, granulated** | 3 T | 1.5 T |  |  |  |
| **Ground black pepper** | 1 T | **.5 T *or \_\_\_\_\_\_\_\_*t** |  | .25 T |  |
| **Whole fennel seed** | 3 T |  |  | **1.5 t *or \_\_\_\_\_* T** |  |
| **Tomato sauce** | 1 can (#10 can) |  |  |  | 1 lb |
| **Tomato paste** | 78 fl oz | **39 fl oz *or***  ***\_\_\_\_* c *\_\_\_\_* fl oz** |  |  |  |
| **Water** | 16 fl oz |  |  | 4 fl oz |  |

**Part 2: Edible Purchase (EP) vs. Actual Amount to Purchase (AP)**

|  |  |  |
| --- | --- | --- |
| **Equations Being Used Note: Convert yield percentage to a decimal (ex. 23% to .23)** | | |
| **EP = AP**  **Yield Percentage** | **AP x Yield % = EP** | **Unit Price x AP Amount = Cost** |

**Using the percentage yields provided, complete the following table.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EP Amount** | **Yield %** | **Yield % As Decimal** | **AP Amount**  (round to nearest .01) | **Ingredient Cost in Recipe**  (be sure unit measurements match) | **Actual Amount to Purchase**  (round AP amount to the  **next** full lb or purchasable unit) |
| **2 lb tomatoes**  (**$0.95/lb**) | 90% | **.9** | **2 lb**/**.9** =  **2.22 lb** | **2.22 lb x $0.95/lb = $2.11** | **3 lb** |
| **1.5 lb summer squash**  ($0.79/lb) | 90% |  |  |  |  |
| **1 lb eggplant**  ($1.19/lb) | 90% |  |  |  |  |
| **8 oz onion**  ($0.25/lb) | 90% |  |  |  |  |
| **1 oz garlic**  ($0.35/lb) | 88% |  |  |  |  |
| **8 fl oz olive oil**  ($25/gal) | 100% |  |  |  |  |
| **⅛ oz kosher salt**  ($1/lb) | 100% |  |  |  |  |