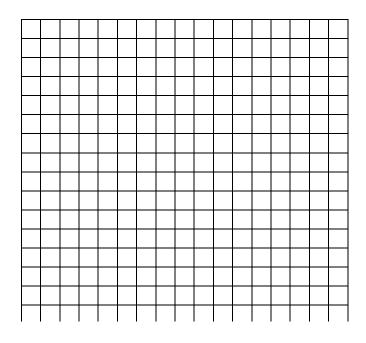**Introduction to Systems of Equations**   Name_____

Scenario: The PTSA is planning to sell school spirit wear next year as a fundraiser to raise money for student field trips. They have investigated several companies to verify product quality and reliable business practice. They have narrowed the choice of suppliers to two vendors, but need your help in making the final decision. Use what you have learned about writing and graphing linear equations to help you decide which supplier to choose. Questions have been provided to help guide your decision.

A. The Shirt Shack charges a $50 set-up fee to cover the artwork for an order and $8 per t-shirt.
   Shirt's Plus charges a $100 set-up fee to cover the artwork for an order and $6 per t-shirt.

1. How much would it cost just to have the artwork completed without placing an order?
2. How much would it cost to order 10, 20, 30, … shirts?
3. When is the cost from The Shirt Shack equal to the cost from Shirt's Plus?
4. Who is the least expensive vendor in the beginning?
5. When (if ever) does the least expensive vendor become more expensive?

Labels			
Units			
Formula			

Using the information you have discovered, make a recommendation to the PTSA concerning the t-shirt order.

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B.. The Shirt Shack charges a $100 set-up fee to cover the artwork for an order and $18 per sweatshirt.
Shirt's Plus charges a $50 set-up fee to cover the artwork for an order and $20 per sweatshirt.

Labels			
Units			
Formula			

Recommendation:_____

C.. The Shirt Shack charges a $30 set-up fee to cover the artwork for an order and $15 per hat.
Shirt's Plus charges a $50 set-up fee to cover the artwork for an order and $15 per hat.

Labels			
Units			
Formula			

Recommendation:_____