

**Advanced Algebra**

Name \_\_\_\_\_

**2.7 Worksheet**

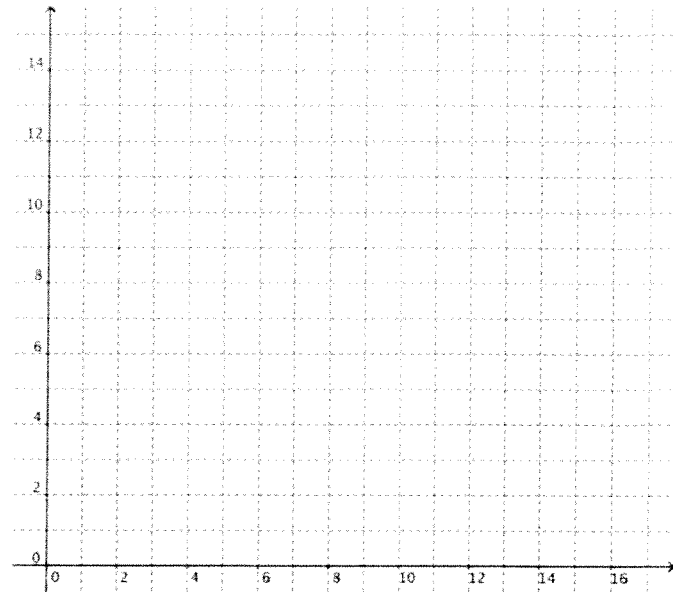
Period \_\_\_\_\_

1. A restaurant offers two different steak meals. Steak with potatoes costs \$35 and steak with broccoli costs \$25. The restaurant plans on making at least \$400 from its steak meals each night.

a. Come up with an inequality to show how many of each steak meal the restaurant could sell.

b. Graph the inequality.

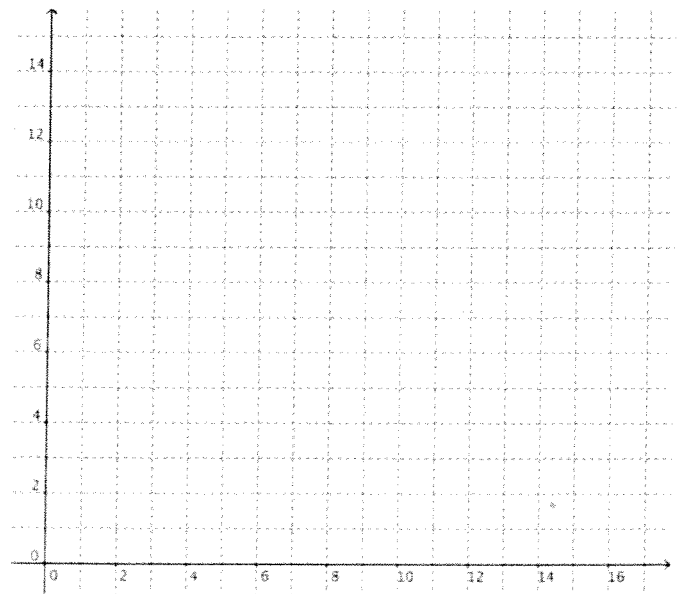
c. Customers ordered steak with potatoes 20 times in the first half of the evening. How many broccoli meals need to be sold in order to match the restaurant's budget?



2. Molly wants to make cookies for her book club and she has 20 eggs in her refrigerator. Her chocolate chip cookie recipe calls for 2 eggs per batch but her snicker doodle recipe requires 3 eggs per batch.

a. Write an inequality to describe how many batches of cookies Molly can make.

b. Graph the inequality.



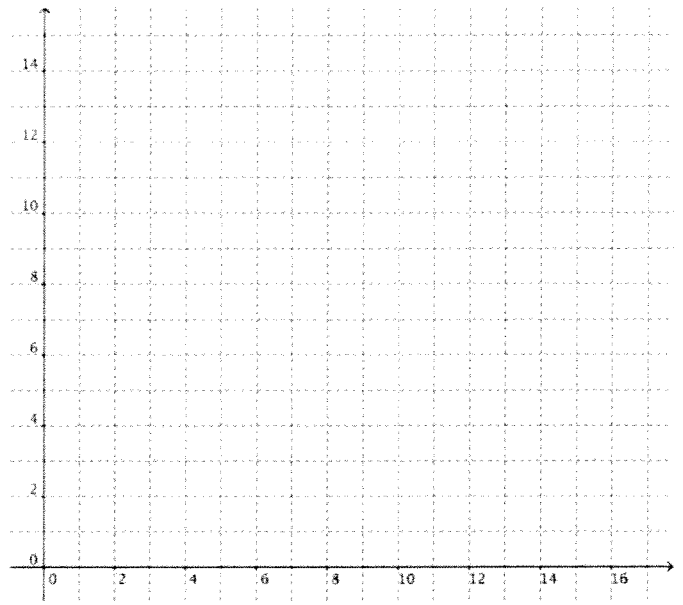
c. If Molly wants to make as many cookies as possible, how many batches of each type should she make?

3. The math department is selling calculators and protractors. Calculators cost \$40 a piece and protractors sell for \$20. The math department goal is to raise at least \$320 to buy Mrs. Norman a gift.

a. Write an inequality relating the number of calculators and compasses sold to their goal.

b. Graph the inequality.

c. If the department sold exactly sold 4 compasses last week, how many calculators must be sold to reach their goal.



4. At least 35 performers are in the grand finale of the circus. Some pile into cars, while others balance on bicycles. 7 performers are in each car and 5 performers are on each bicycle.

a. Write an inequality relating the number of cars and bicycles that are needed in the grand finale.

b. Graph the inequality.

c. If there are 3 cars used in the grand finale show, how many bicycles are needed to use at least 35 performers?

