



*Integrated Math IA*  
Module 5

Student Name: \_\_\_\_\_ Teacher Name: \_\_\_\_\_

As you work through the chapters in your Integrated Math 1 course, you will be encouraged to think and to make conjectures while you persevere through challenging problems and exercises. You will make errors – and that’s okay! Learning and understanding occur when you make errors and push through mental roadblocks to comprehend and solve new and challenging problems.

Text: *Integrated Math I*, Big Ideas, 2016

**To ensure you are learning, you must show your work for all exercises.  
YOU WILL NOT EARN CREDIT FOR ANSWERS WITHOUT WORK.**

**Chapter 5: Solving Systems of Linear Equations (5.1-5.7)**

- \_\_\_\_\_ Maintaining Mathematical Proficiency (page 215): Complete exercises #1-8 all
- \_\_\_\_\_ 5.1 Solving Systems of Linear Equations by Graphing: Read the lesson and complete exercises  
#1, 3, 4, 9, 10, 11, 13, 14, 17, 18, 20, 34, 35, 36  
(free graphing calculator at [www.desmos.com/calculator](http://www.desmos.com/calculator))
- \_\_\_\_\_ 5.2 Solving Systems of Linear Equations by Substitution: Read the lesson and complete exercises  
#3, 4, 6, 8, 9, 10, 14, 21, 22, 36, 37, 38, 40
- \_\_\_\_\_ 5.3 Solving Systems of Linear Equations by Elimination: Read the lesson and complete exercises  
#3, 4, 5, 6, 11, 12, 19, 23, 24
- \_\_\_\_\_ 5.4 Solving Special Systems of Linear Equations: Read the lesson and complete exercises  
#1, 3, 4, 5, 6, 23, 33, 34
- \_\_\_\_\_ 5.5 Solving Equations by Graphing: Read the lesson and complete the exercises  
#1, 3, 4, 5, 7, 9, 34
- \_\_\_\_\_ 5.6 Graphing Linear Inequalities in Two Variables: Read the lesson and complete exercises  
#2-7 all, 11, 12, 13, 14, 31, 34
- \_\_\_\_\_ 5.7 Systems of Linear Inequalities: Read the lesson and complete exercises  
#1, 3-9 all, 11, 14, 15, 49-55 all

*Students must complete the Chapter Review and Project with a teacher or tutor at school.*

- \_\_\_\_\_ Chapter Review (pages 264-266): Complete exercises #1-22 all
- \_\_\_\_\_ Complete the attached Project (No project = No credit)

**A teacher or tutor reviewed the Chapter Review and Project with the student.**

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Grade



Integrated Math 1 Project  
Module 5: Solving Systems of Linear Equations  
Textbook Pages: 215-268

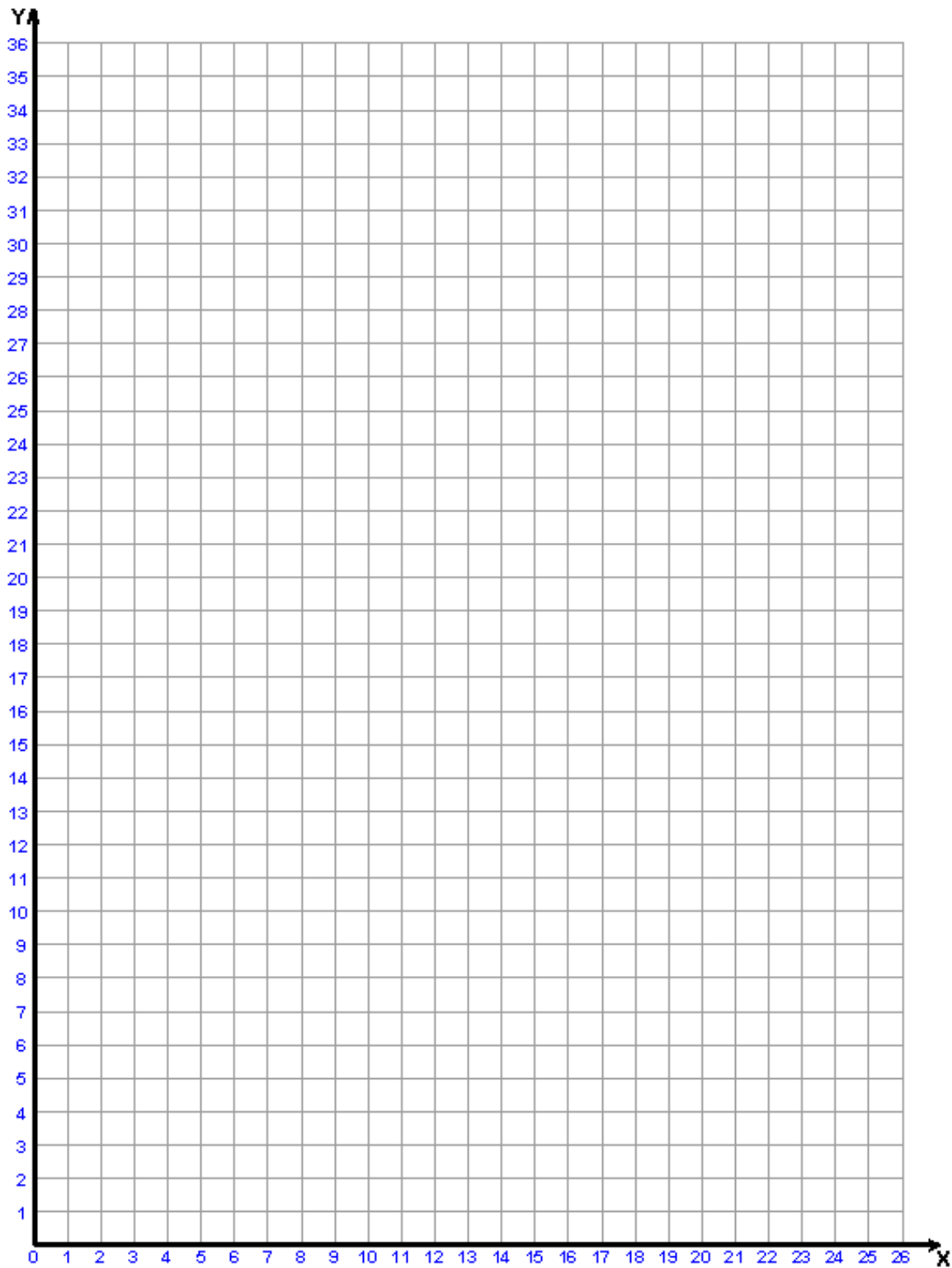
Marnie Goes to the Carnival

**Be sure to answer questions in complete sentences.**

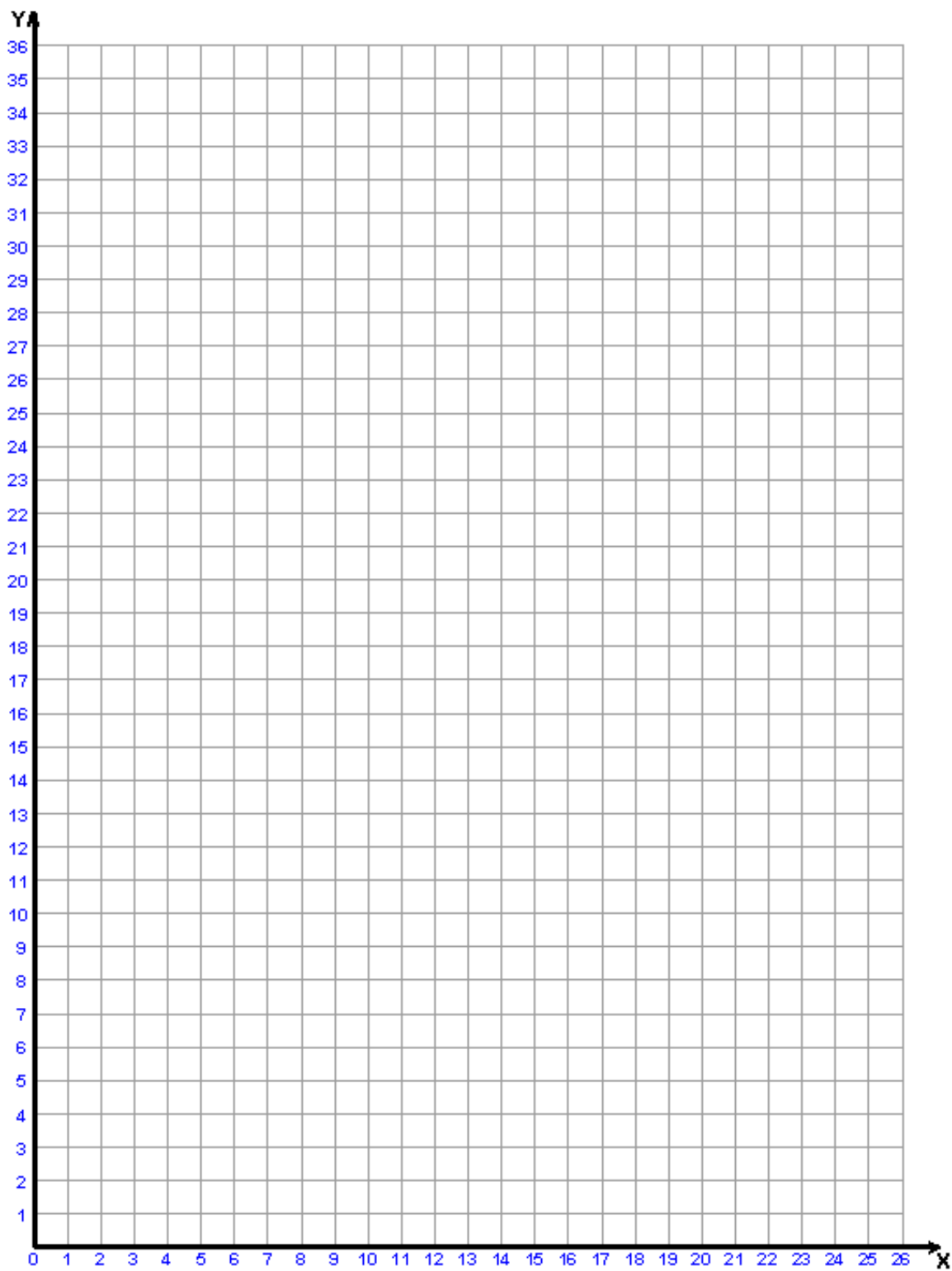
Next weekend, Marnie wants to attend either Carnival A or Carnival B. Carnival A charges \$6.00 for admission and an additional \$1.50 per ride. Carnival B charges \$2.50 for admission and an additional \$2.00 per ride.

1. In function notation, write  $A(x)$  to represent the total cost of attending carnival A and going on  $x$  rides. In function notation, write  $B(x)$  to represent the total cost of attending carnival B and going on  $x$  rides.
  
  
  
  
  
  
  
  
  
  
2. Algebraically, determine when the number of rides **AND** the total cost of attending each carnival is the same.

3. Use the coordinate plane below to answer question number 2 graphically. This way, you will prove that your solution is correct. Label your answer on the graph.



4. Marnie wants to go on five rides. Use the graph to determine which carnival would have the lower total cost. Justify your answer.
5. Marnie decided that Carnival A was the better deal for how many rides she wanted to go on. She spent \$54 buying ride tickets and food tickets. Each ride ticket cost \$1.50 and each food ticket cost \$3.00. She purchased a total of 26 ride and food tickets combined.
- Let  $r$  represent the number of ride tickets she bought and let  $f$  represent the number of food tickets she bought. Write a system of equations that represents this situation.
  - Solve the system above to determine how many ride tickets and how many food tickets Marnie purchased. You may use either an algebraic or graphical approach. (Use coordinate plane on the next page only if you choose the graphical approach).



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