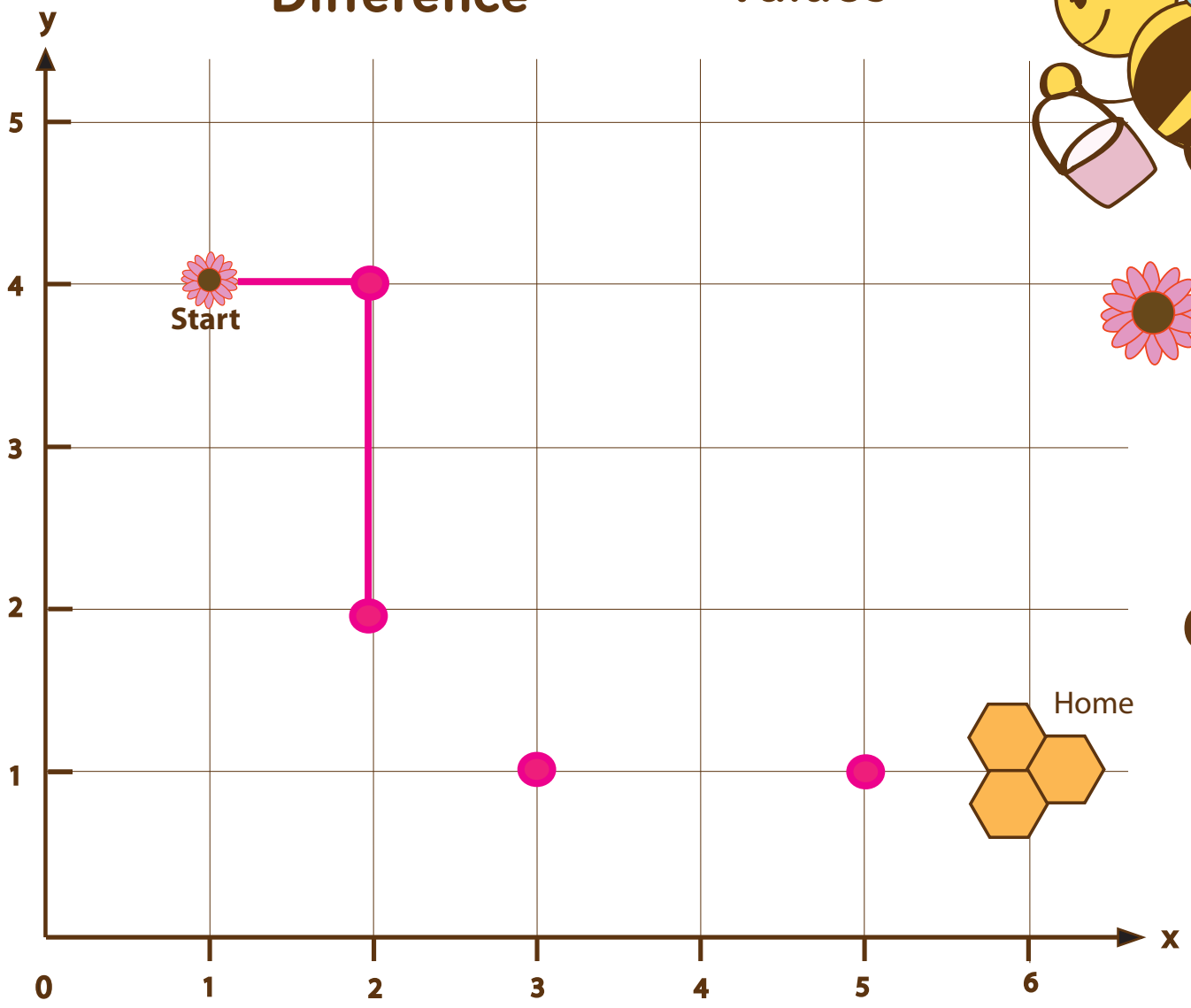
Algebra

Adventures

4th Grade

Coordinates Points

Difference Values



(x, y)

education.com

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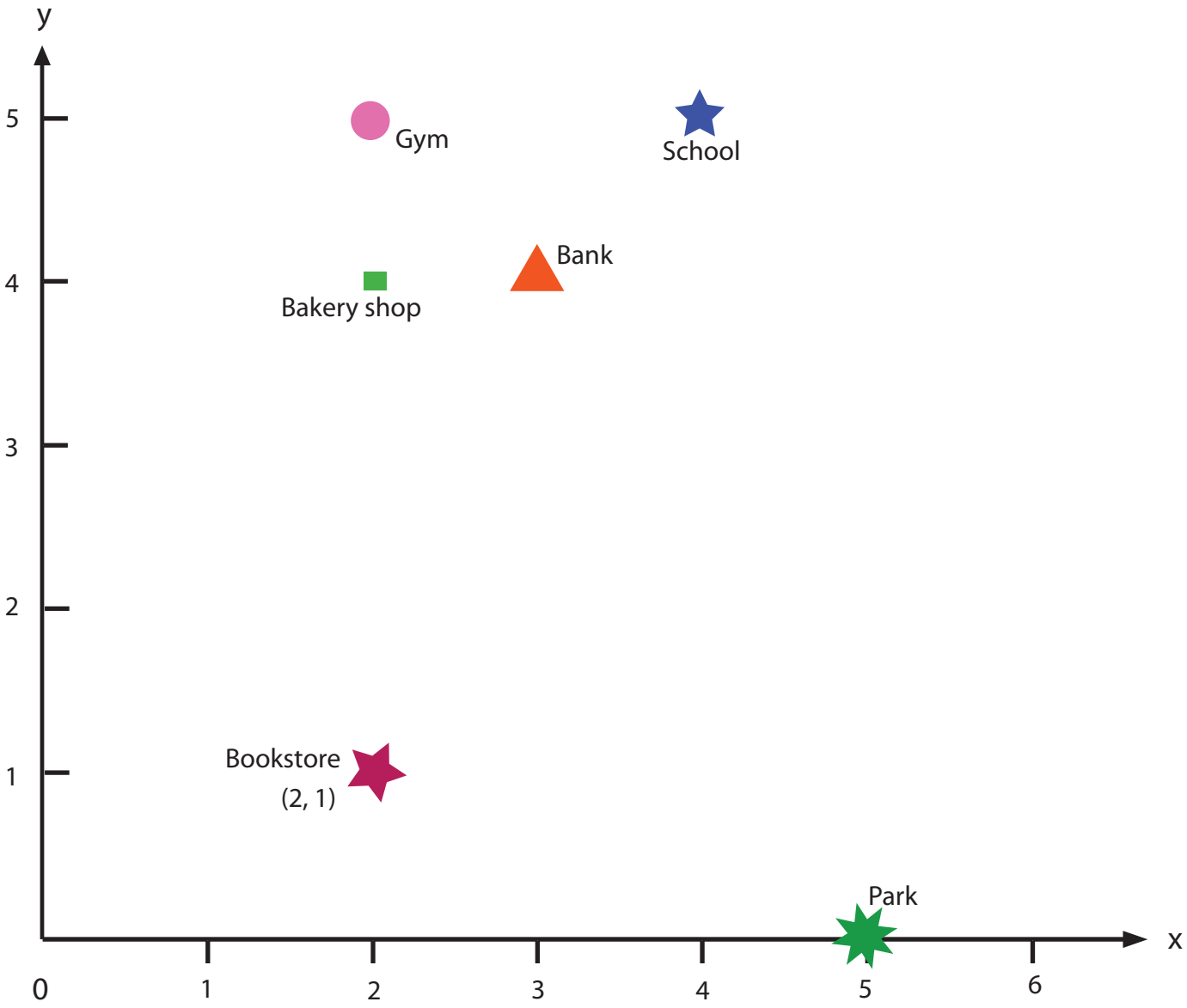
Algebra Adventures

** Has an Answer Sheet*

Where are they?: Tell the position

Your friend is new in town. Tell her positions of a store, bank, and school using X and Y Coordination. Write the coordinates of each place next to the position (look at the example). Then, answer questions below.

Review: The first number refers to X coordinate. The second number refers to Y coordinate.



What is the x-coordinate of the school?

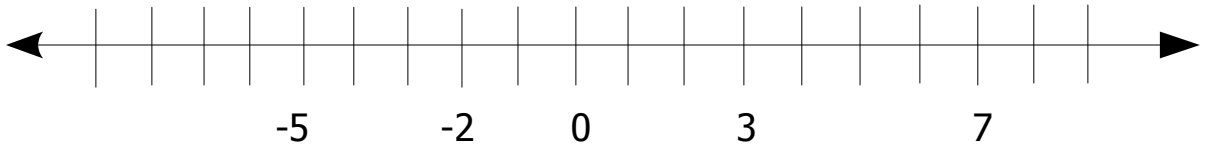
What is the y-coordinate of the park?

Mark on a grid a position of a train station which is (3, 2).

Mark on a grid a position of a community center which is (6, 3).

Introduction to Integers

Fill in the missing numbers to complete the number line.



Fill in the blanks with neutral, positive or negative.

Zero is a _____ integer.

A whole number less than zero is a _____ integer.

A whole number greater than zero is a _____ integer.

Whole numbers that are _____ integers can be written with or without a sign.

Circle the integers.

-4 ½ 3 -2 0 ¾ +6 8 -7 ¼ 1 +9

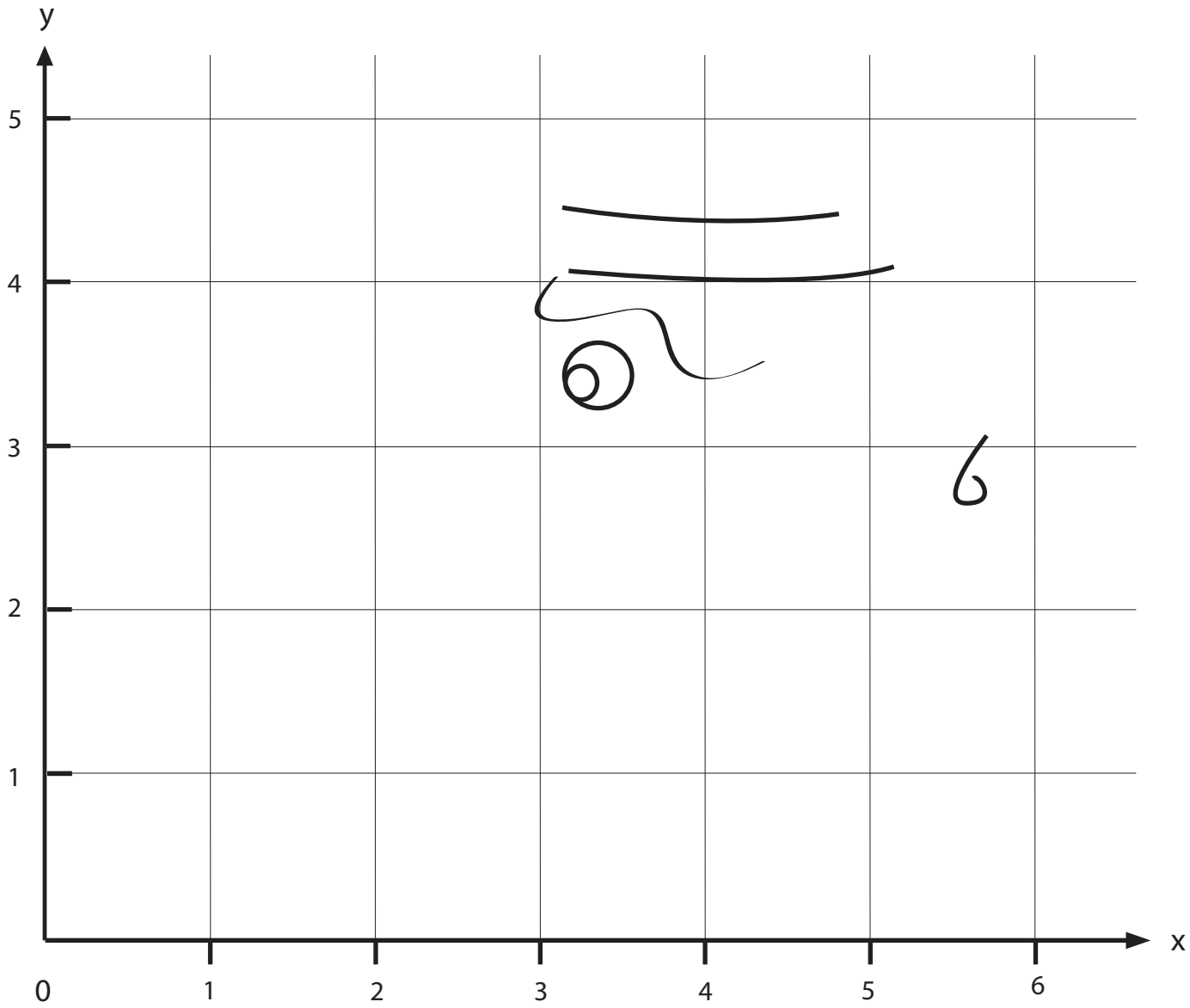
Match the opposite integers.

3	5	2	4	1	6	7
-5	-2	-3	-6	-7	-4	-1

Plot a dot, Draw a line, What do you find?

Can you find the hiddden image? Plot the coordinates in order, draw a line between each one, and see what figure appears! Remember, the first number is on the X axis and the second number is on the Y axis.

1. (3, 0)	9. (2, 4.5)	17. (6, 3.5)
2. (1, 1.5)	10. (3, 4.5)	18. (6, 2.5)
3. (3.5, 1.5)	11. (3, 5)	19. (5.5, 2.5)
4. (4,2)	12. (5,5)	20. (4.5, 0)
5. (2,2)	13. (5, 4.5)	
6. (2.5, 2.5)	14. (6, 4.5)	
7. (1.5, 2.5)	15. (5.5, 4)	
8. (3, 4)	16. (5.5, 3)	



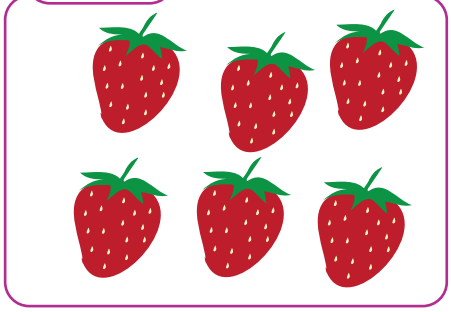
Math
Numbers

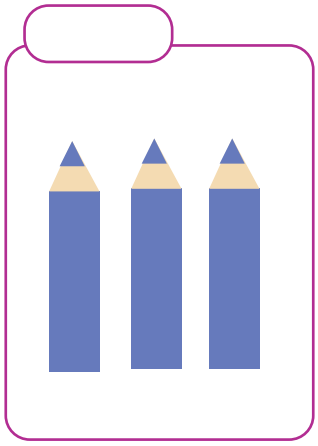
Prime Numbers vs. Composite Numbers

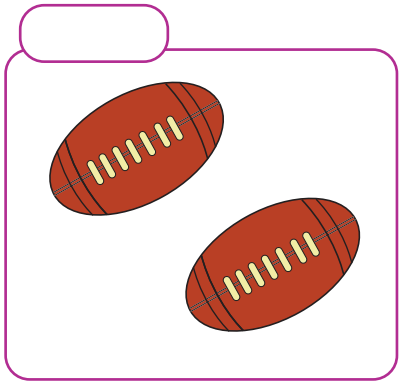
A prime number is a whole number that can only be divided evenly by 1 or itself.
A composite number is a whole number that can be divided evenly by at least one number other than 1 and itself.

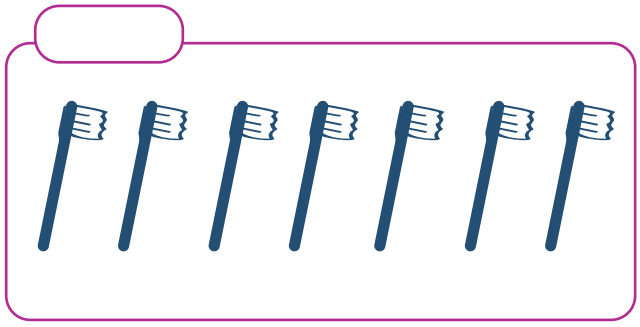
Look at the objects in the boxes below. Write "P" if the number of objects in the box is a prime number and "C" if the number of objects is a composite number. See the example.

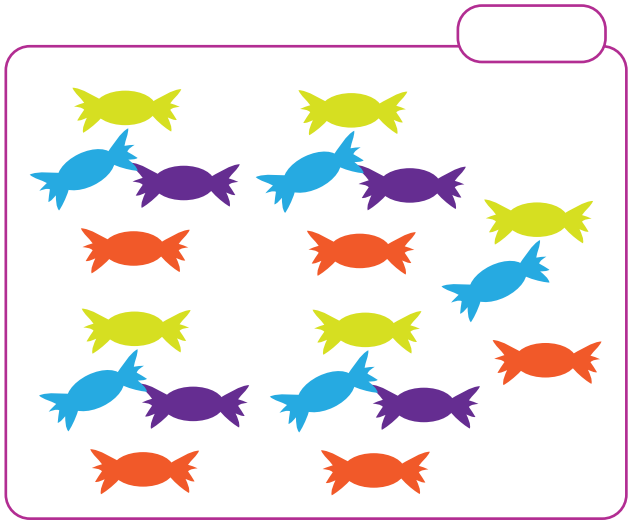
C

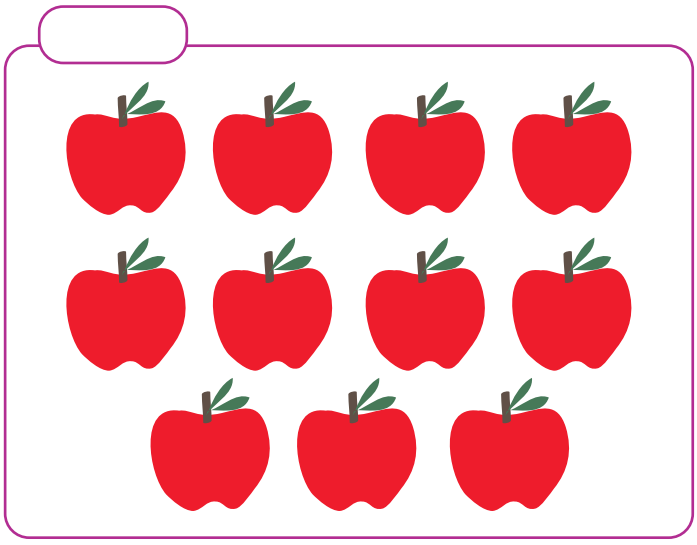


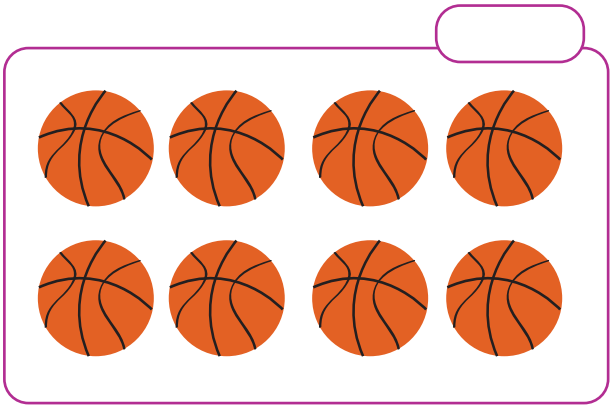












Math
Algebra

Finding Factors

Factors are numbers that you multiply together to get another number.
For example, 2 multiplied by 4 equals 8. So 2 and 4 are the factors of 8.

Find the factors of the numbers below. See the example.

10 = 2 x 5

18 = _____

24 = _____

30 = _____

32 = _____

39 = _____

Find the missing factors.

15 = 3 x ☐

21 = 3 x ☐

45 = 9 x ☐

42 = 7 x ☐

---

36 = 2 x 2 x 3 x ☐

60 = 2 x 3 x 2 x ☐

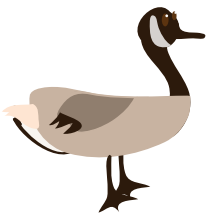
75 = 5 x 3 x ☐

* When the factor is a prime number, it is called a prime factor.

Math
Algebra

Least Common Multiple: Easy

A *multiple* is the product of two integers. To find the multiples of a certain number, multiply that number by every integer, starting with 1.
Example: The multiples of 2 are 2, 4, 6, 8, 10, and so on.



Common multiples are numbers that share one or more of the same multiples.
Example: Multiples of 2 are 2, 4, 6, 8, 10, 12 and so on.
Multiples of 3 are 3, 6, 9, 12, 15, and so on.
6 and 12 appear in these lists, so they are common multiples of 2 and 3.

Least common multiple (LCM) is the smallest common multiple of two or more numbers.
From the example above, the LCM of 2 and 3 is 6.
LCM can be found by listing the multiples and looking for the smallest common one in the lists.

Circle the common multiples of the pair of numbers, then answer the questions.

Multiples of 4 = 4, 8, 12, 16, 20 ...

Multiples of 5 = 5, 10, 15, 20, 25, ...

The common multiple is: _____ .

The LCM is _____ .

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42, ...

Multiples of 7 = 7, 14, 21, 28, 35, 42, 49, ...

The common multiple is: _____ .

The LCM is _____ .

Multiples of 8 = 8, 16, 24, 32, 40, ...

Multiples of 10 = 10, 20, 30, 40, 50, ...

The common multiple is: _____ .

The LCM is _____ .

Multiples of 9 = 9, 18, 27, 36, 45, 54, 63, ...

Multiples of 12 = 12, 24, 36, 48, 60, 72, ...

The common multiple is: _____ .

The LCM is _____ .

Fill in the blanks and find the least common multiples below.

Multiples of 2 = 2, ___ ,___ , ___ ,___ ,12, ...

Multiples of 3 = 3, ___ ,___ , ___ ,___ ,18, ...

The common multiples are: _____ .

The LCM is _____ .

Multiples of 3 = 3, __ ,__ , __ ,__ ,__ , __ ,__ , ...

Multiples of 4 = 4, __ ,__ , __ ,__ ,__ , __ ,__ , ...

The common multiples are: _____ .

The LCM is _____ .

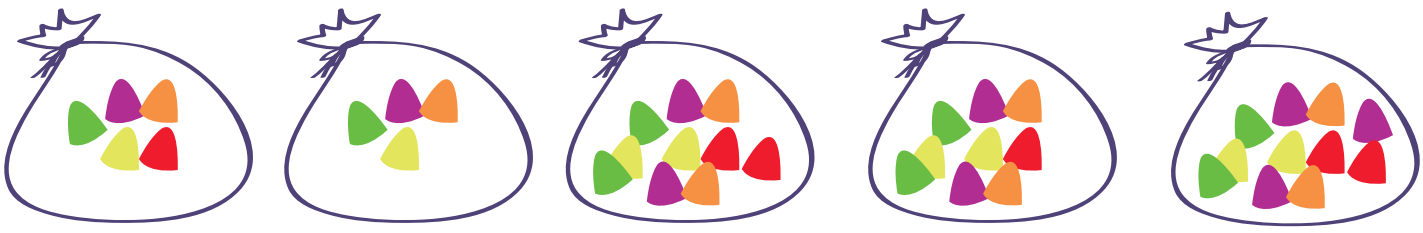
Math
Numbers

Prime Numbers

A prime number is a whole number that can only be divided evenly by 1 or itself. For example, 2 is a prime number because the only numbers that it can be divided by evenly are 2 and 1. Circle all the prime numbers in the box below.

2 17 5 11
3 19 37
13 7
41 35 63
6
18 62
81 44
77 22

Circle the bags that contain a prime number of gumdrops.



4th Grade

Math

Calculation

Find The Missing Operation #2

Add the operation symbols: addition(+), subtraction(-), multiplication(x), or division(÷) to complete the equation.

(8 - 5) ◯ 6 = 9

(7 + 4) ◯ 7 = 18

(12 + 6) ◯ 4 = 14

(22 - 3) ◯ 9 = 10

(3 x 7) ◯ 4 = 25

(6 x 5) ◯ 3 = 33

(4 x 2) ◯ 6 = 48

(3 x 3) ◯ 2 = 11

(30 - 15) ◯ 3 = 5

(10 - 2) ◯ 7 = 56

(24 - 10) ◯ 1 = 14

(7 x 7) ◯ 3 = 52

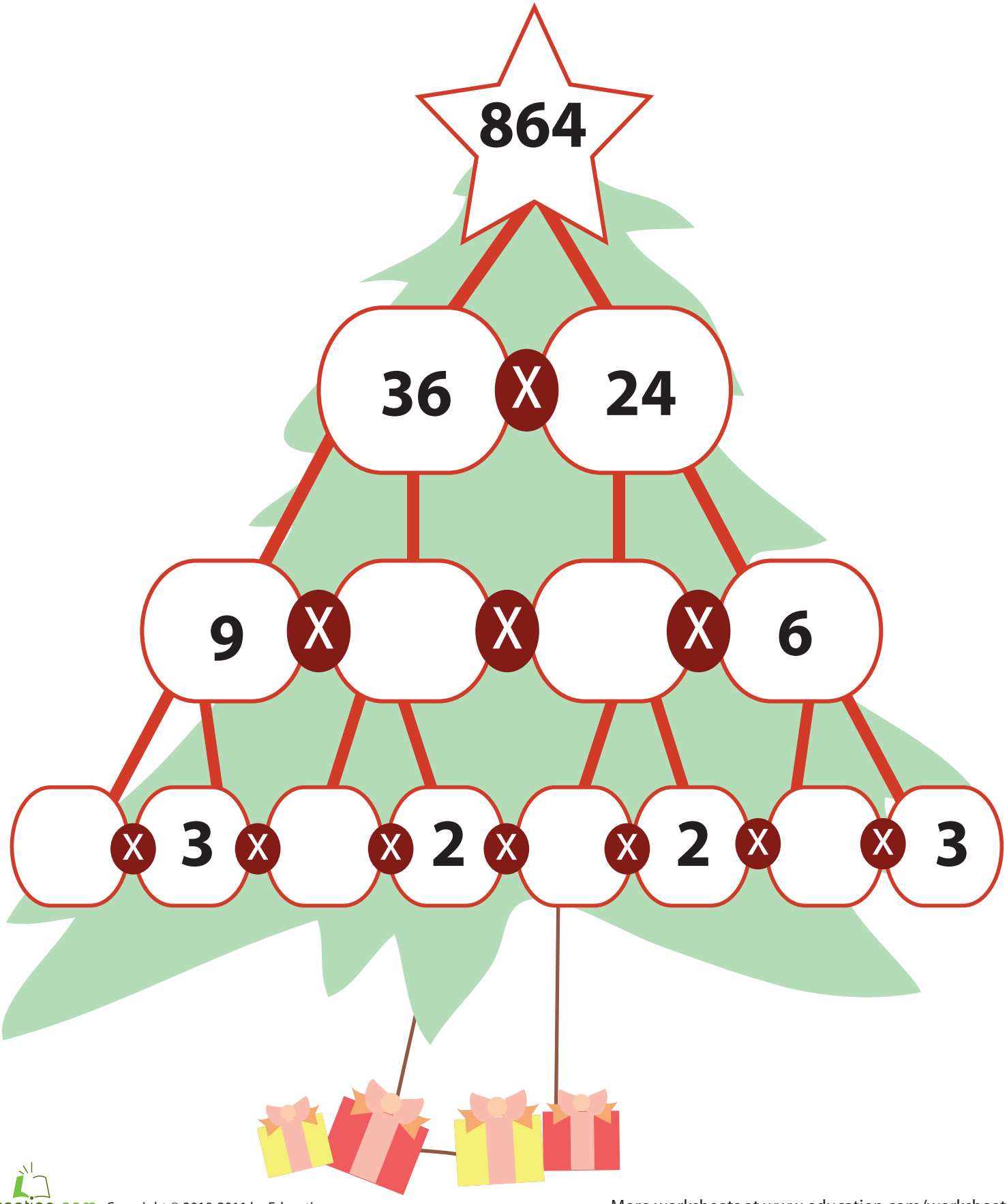
(100 - 80) ◯ 4 = 5

(45 - 18) ◯ 9 = 3

Math
Algebra

Factor Tree

Factors are numbers that you multiply together to get another number. Every number can be broken down into factors. Complete the factor tree below by filling in the missing factors.



Collision Coordinates

4TH GRADE
LINEAR MATH

Balloons and birds are on a collision course in the sky! When their paths cross, the balloons pop! Plot 10 points for each of the 4 linear equations using the T-charts given. Graph each line on the x-y coordinates and answer the questions on the right.

Red balloon
$y = 2x - 24$

x	y
12	0
13	2

Green balloon
$y = 3x - 75$

x	y
25	0
26	3

Orange bird
$y = {}^{x}/_{2} + 6$

x	y
0	6
2	7

Blue bird
$y = {}^{x}/_{4} + 13$

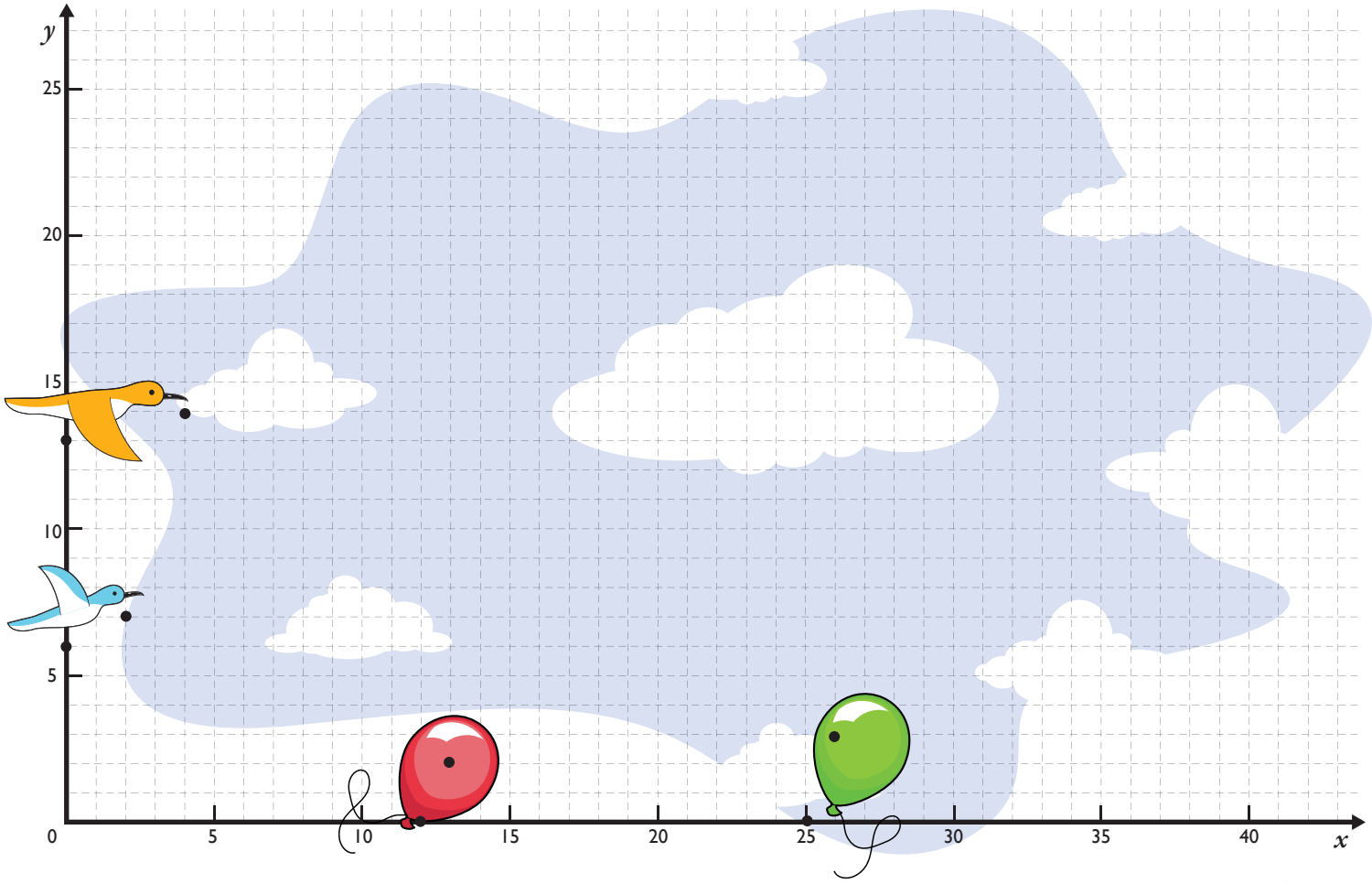
x	y
0	13
4	14

At what coordinate (x,y) does the orange bird pop the red balloon?

(___ , ___)

At what coordinate (x,y) does the blue bird pop the green balloon?

(___ , ___)



Math
Algebra

Greatest Common Factor: Easy

Greatest Common Factor (GCF) is the largest factor that divides two numbers.

Example: Find the greatest common factor of 6 and 10.

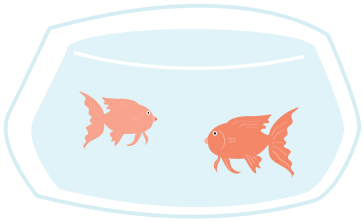
1. Find the prime factors of each number.

   6 = 2 x 3
   10 = 2 x 5

2. Find the common prime factors that 6 and 10 have.

   6 = 2 x 3
   10 = 2 x 5

3. The common prime factor of 6 and 10 is 2.



Circle the common factors of the pair of numbers, then answer the questions.

4 = 2 x 2
6 = 2 x 3

The common prime factor is: _____ .

The GCF is _____ .

6 = 2 x 3
9 = 3 x 3

The common prime factor is: _____ .

The GCF is _____ .

10 = 2 x 5
12 = 2 x 2 x 3

The common prime factor is: _____ .

The GCF is _____ .

14 = 2 x 7
35 = 5 x 7

The common prime factor is: _____ .

The GCF is _____ .

Greatest common factor can also be found by *multiplying all the common prime factors*. See the example.

18 = 2 x 3 x 3
12 = 2 x 2 x 3

The common prime factors are 2 and 3 .

The GCF is 2 x 3 = 6 .

20 = 2 x 2 x 5
30 = 2 x 3 x 5

The common prime factors are _____ .

The GCF is _____ .

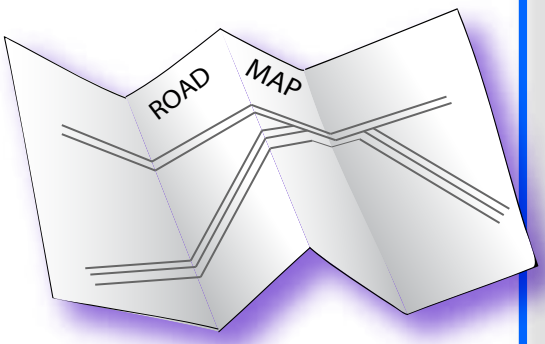
Solve the word problems. Show your work and circle your answers.

1. Joey and his family are taking a road trip. On Monday, they travel 68 miles. On Tuesday, they travel 25. On Wednesday, they travel 33 miles. What is the average number of miles they drove per day?

2. Joey has three brothers: Jonathan, Jacob, and Jack. Jacob is older than Jonathan but younger than Joey. Jack is younger than Jonathan. List the four boys in order from oldest to youngest.

3. Joey wants to figure out how many minutes his family has spent on the road. On Monday, they traveled for 3 hours. They drove for 1 1/2 hours on Tuesday and another 1 1/2 hours on Wednesday. How many minutes have they traveled in all?

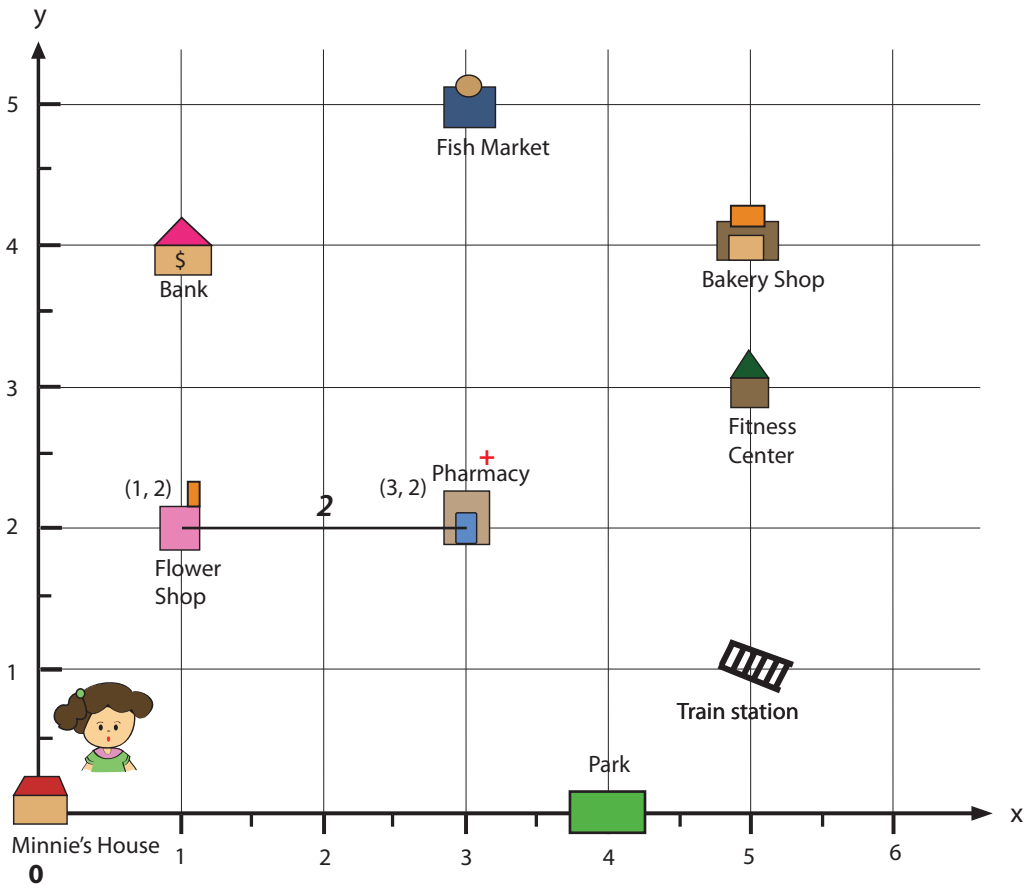
4. Joey and his family plan to visit the Grand Canyon, Yellowstone National Park, and the Washington Monument. They will travel 1,323 miles to get to the Grand Canyon. From there, they'll drive 846 miles to Yellowstone. Finally, they will travel 2,166 miles to get to the Washington Monument. How many miles will they travel altogether?



Run Errands Efficiently: Practice Coordinates

Help Minnie run errands by telling her how far it is between each location. To find the distances between the coordinates, subtract the x-values and/or the y-values (see an example).

Review: The first number refers to X coordinate. The second number refers to Y coordinate.



Example:

Distance between Pharmacy (3, 2) and Flower shop(1, 2). Subtract difference of X-value of each location. X value of Pharmacy = 3, X value of Flower shop = 1.
Therefore, the distance is 3 - 1 = 2.

1. How far between the pharmacy and the fish market?

2. How far between the bank and the bakery shop?

3. Which one is a greater in distance - Minnie's house to the park, or the train station to the bakery shop?

4. If Minnie travels from the flower shop to the bank, then to the bakery shop, and stops at the fitness center, how far has she traveled?

MATH
FRACTIONS

Skill Practice 1

Finding the GCF

*The **greatest common factor (GCF)** is the largest whole number that divides evenly into multiple numbers.*
Look at the two numbers in each problem and find the greatest common factor between them. See the example below for a step by step process to finding the GCF.

Example

36	48
2	2
2	2
3	2
3	2
	3

2 x 2 x 3 = 12
GCF

36 = 18 x 2 — 2 is a prime number and divides into 18 evenly 36 times.
36 = 9 x 2 x 2 — 18 can be divided by 2, leaving 9.
36 = 3 x 3 x 2 x 2 — 9 can be divided by 3, leaving 3. Now we have all prime numbers.

48 = 24 x 2
48 = 12 x 2 x 2
48 = 6 x 2 x 2 x 2
48 = 3 x 2 x 2 x 2 x 2

Once you find the prime factors of the second number, see which numbers they have in common. Circle and multiply them to get your GCF. If there are no prime factors in common, then the GCF is 1.

Numbers in common:
2, 2, 3

40	60

GCF

30	75

GCF

84	105

GCF

56	96

GCF

18	25

GCF

50	125

GCF

72	108

GCF

56	112

GCF

Math
Algebra

Prime Factorization

Factors are numbers that you multiply together to get another number. When a factor is a prime number, it is called a prime factor. For example, the prime factors of 12 are 2 x 2 x 3. So 2, 2, and 3 are prime factors of 12.

Find the prime factors of the numbers below. See the example.

16 = 2 x 8

= 2 x 2 x 4

= 2 x 2 x 2 x 2

---

36 = 4 x 9

= ☐ x ☐ x ☐ x ☐

---

48 = 4 x 12

= ☐ x ☐ x ☐ x ☐

= ☐ x ☐ x ☐ x ☐ x ☐

---

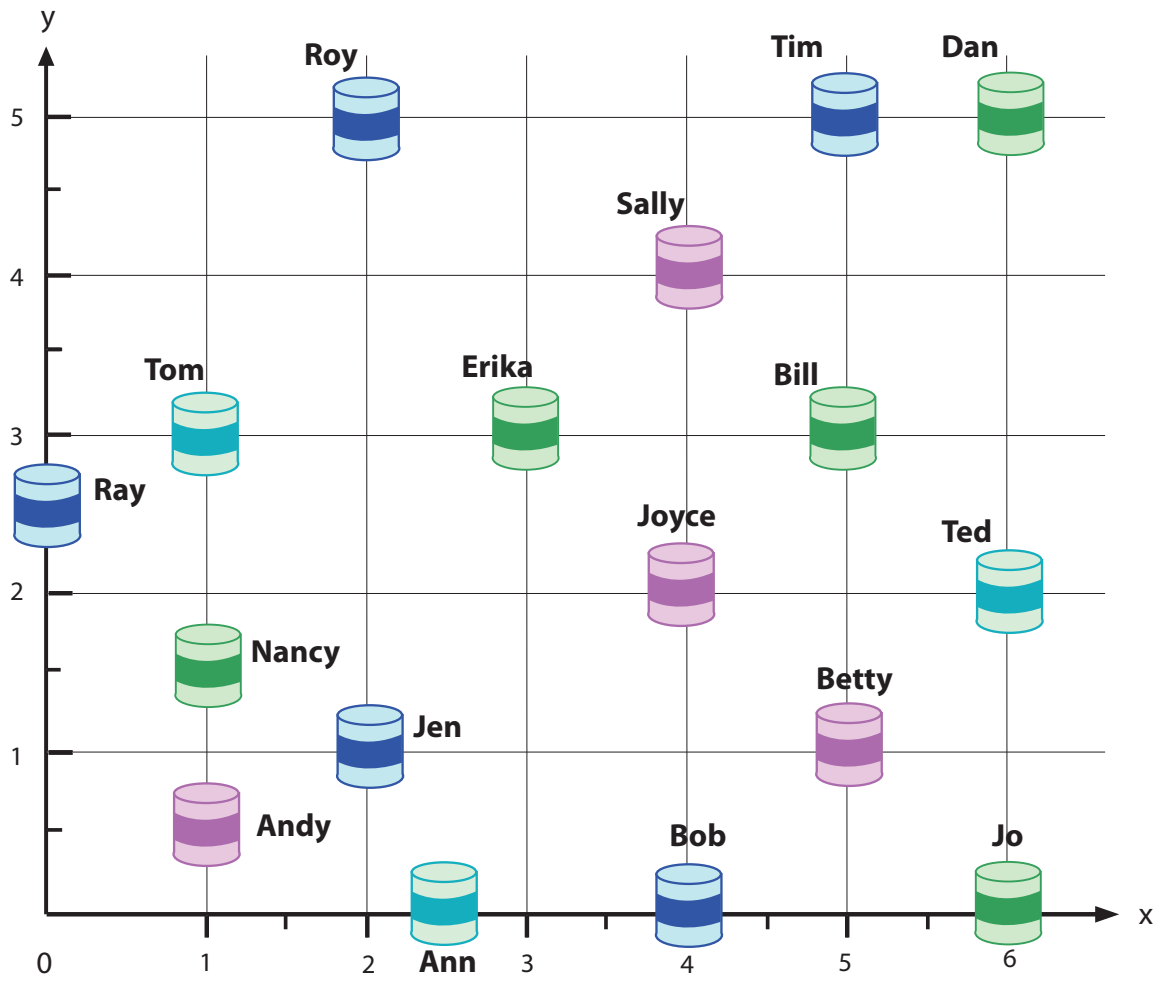
56 = 7 x ☐

= ☐ x ☐ x ☐

= ☐ x ☐ x ☐ x ☐

Time Capsules: Practice Coordinates

Your friends need your help in writing code to show where they buried their time capsules, so later they will remember where they are.



Roy = _____ **Bill =** _____ **Jo =** _____ **Andy =** _____

Tom = _____ **Jen =** _____ **Ray =** _____ **Ray =** _____

Tim = _____ **Erika =** _____ **Joyce =** _____ **Betty =** _____

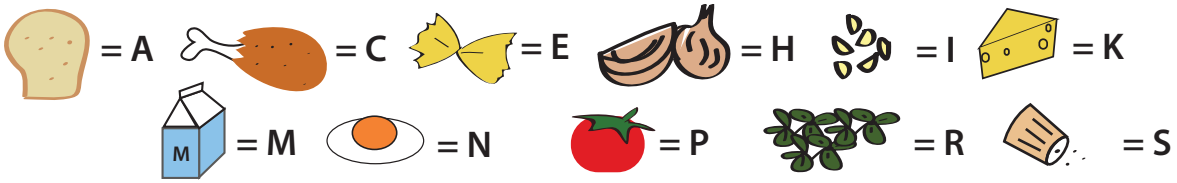
Dan = _____ **Ann =** _____ **Nancy =** _____

Ted = _____ **Bob =** _____ **Sally =** _____

My Lunch Box: Practice Coordinates

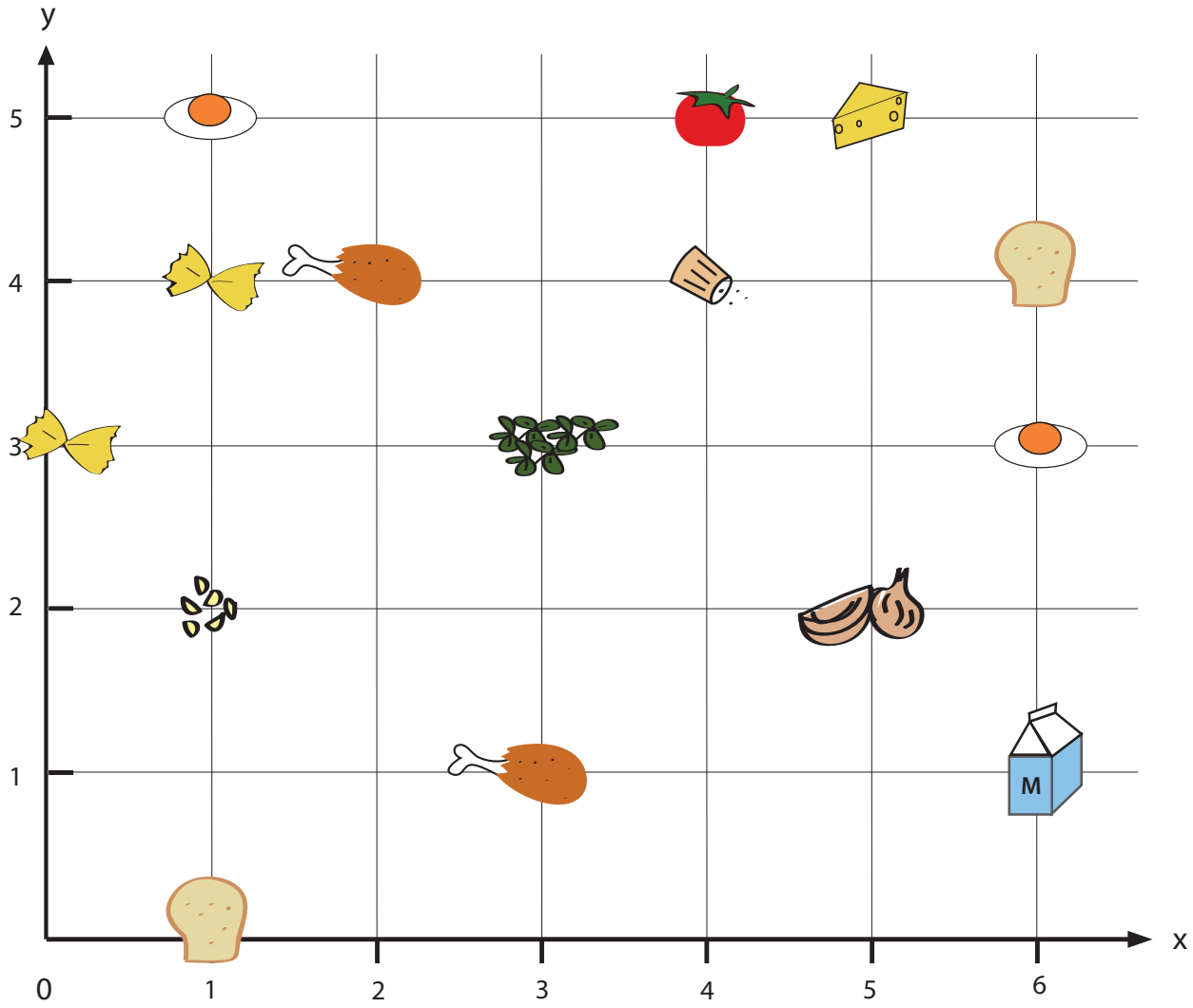
Use the coordinates that go with the ingredients to find the letters that spell out what is in the lunch box.

Ingredients

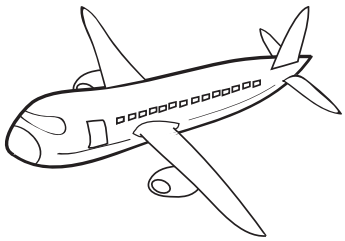


Coordinates

1. (2, 4)	4. (3, 1)	7. (6, 3)	10. (3, 3)	13. (4, 4)
2. (5, 2)	5. (5, 5)	8. (4, 5)	11. (6, 1)	14. (6, 4)
3. (1, 2)	6. (0, 3)	9. (1, 0)	12. (1, 4)	15. (1, 5)



Answer: _____



Air Show: Practice Coordinates

The pilots practice flying skills to prepare for the upcoming air show. Help each pilot organize his positions by plotting his coordinates in the grid below and drawing a line to connect each dot of his route. Use a different color for each pilot.

Pilot A

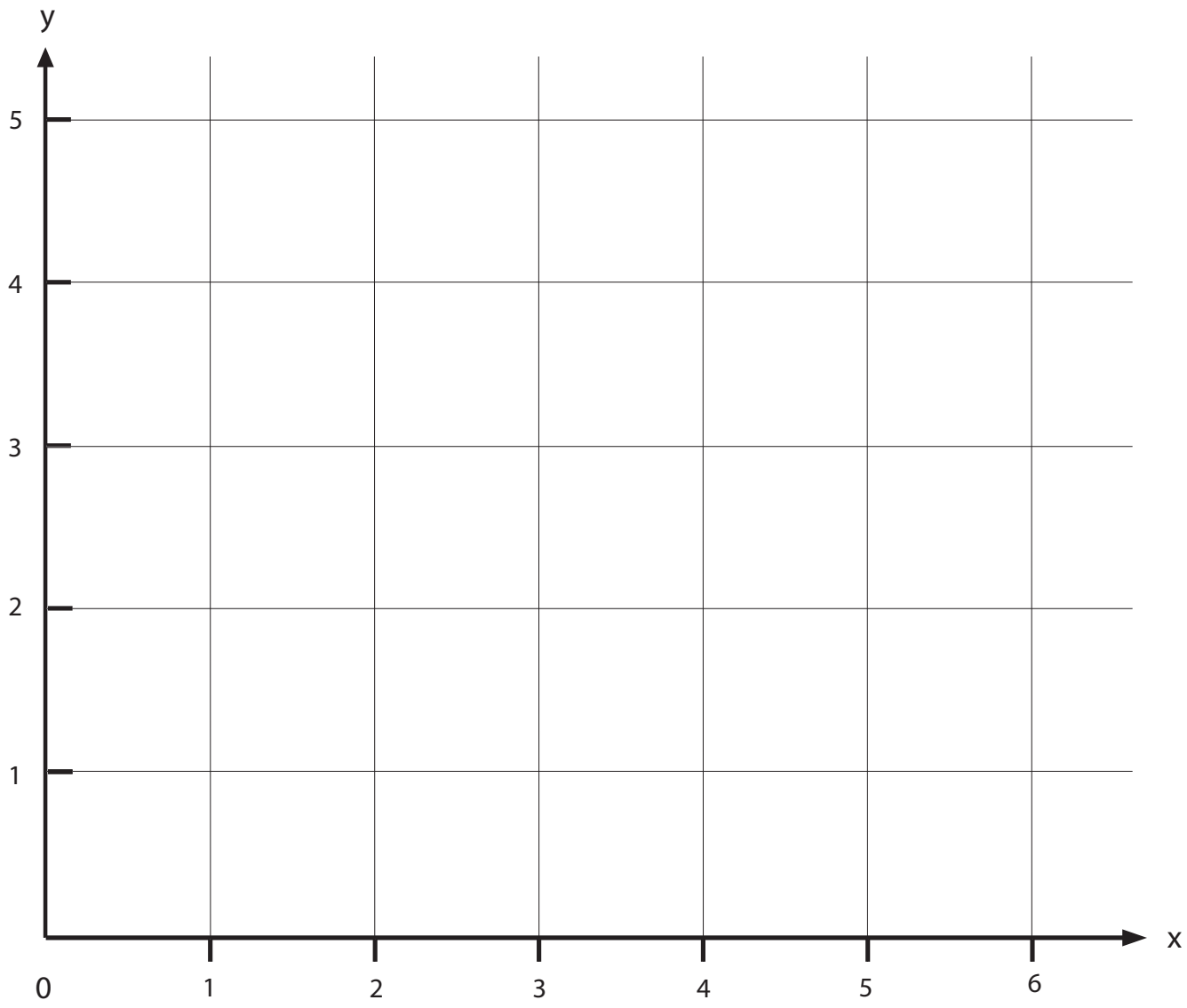
1. (0, 5)
2. (2, 4)
3. (2, 3)
4. (4, 2)
5. (4, 1)
6. (5, 2)

Pilot B

1. (2.5, 4.5)
2. (5, 4)
3. (3, 3)
4. (6, 3)
5. (5, 5)
6. (6, 3.5)

Pilot C

1. (1.5, 4)
2. (1, 2)
3. (2, 2.5)
4. (3, 0.5)
5. (5, 0)
6. (6, 2)



Math
Algebra

Least Common Multiple: Hard

A *multiple* is the product of two integers. To find the multiples of a certain number, multiply that number by every integer, starting with 1.
Example: Multiples of 10 are 10, 20, 30, 40, 50, and so on.

Common multiples are numbers that share two or more of the same multiples.
Example: Multiples of 10 are 10, 20, 30, 40, 50, 60, and so on.
Multiples of 15 are 15, 30, 45, 60, 75, and so on.
30 and 60 appears in these lists, so they are common multiples of 10 and 15.

Least common multiple (LCM) is the smallest common multiple of two or more numbers.
From the example above, the LCM of 10 and 15 is 30.
LCM can be found by listing all the multiples and looking for the smallest common one in the lists.

Find the least common multiple of numbers below. Follow the directions.

Multiples of 9 = 9, 18, ___, ___, ___, ___, ...

Multiples of 15 = 15, 30, ___, ___, ___, ___, ...

The common multiple is _____ . The LCM is _____ .

Multiples of 20 = ___, ___, ___, ___, ___, ___, ...

Multiples of 30 = ___, ___, ___, ___, ___, ___, ...

The common multiples are _____ . The LCM is _____ .

Multiples of 10 = ___, ___, ___, ___, ___, ___, ...

Multiples of 20 = ___, ___, ___, ___, ___, ___, ...

Multiples of 50 = ___, ___, ___, ___, ___, ___, ...

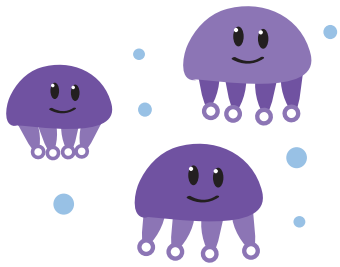
The common multiples are _____ . The LCM is _____ .

Math
Algebra

Greatest Common Factor: Hard

Greatest Common Factor (GCF) is the largest factor that divides two numbers.

Example: Find the greatest common factor of 24 and 18.



1. Find the prime factors of each number.

$24 = 6 \times 4$
$= 2 \times 3 \times 2 \times 2$

$18 = 6 \times 3$
$= 2 \times 3 \times 3$

2. Find the common prime factors of 24 and 18.

$24 = 2 \times 3 \times 2 \times 2$

$18 = 2 \times 3 \times 3$

3. The common prime factors of 24 and 18 are 2 and 3. The greatest common factor can be found by *multiplying all the common prime factors*. Therefore, the greatest common factor of 24 and 18 is 2 x 3 = 6.

Find the greatest common factor of the numbers below.

$30 = 3 \times \_\_ \times \_\_$

$45 = 3 \times 3 \times \_\_$

The common prime factors are: _____ . The GCF is _____ .

$36 = 3 \times 2 \times 2 \times \_\_$

$42 = 7 \times \_\_ \times 3$

The common prime factors are: _____ . The GCF is _____ .

$120 = 2 \times \_\_ \times 3 \times 5 \times \_\_$

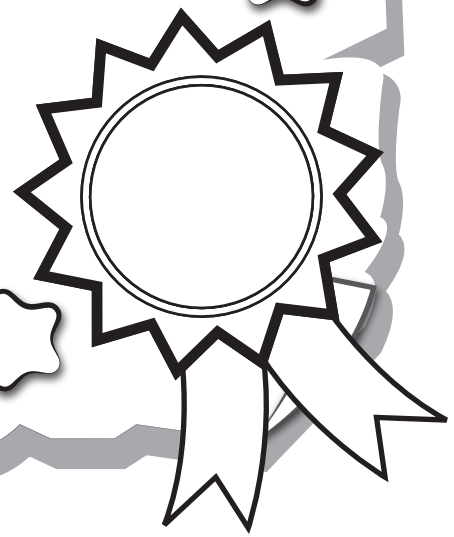
$100 = 2 \times 5 \times \_\_ \times \_\_$

The common prime factors are: _____ . The GCF is _____ .

Great job!

_____

is an Education.com math superstar



Answer Sheets

Algebra Adventures

Where are They? Tell the Position
Introduction to Integers
Plot a Dot, Draw a Line, What Do You Find?
Finding Factors
Least Common Multiple: Easy
Prime Numbers
Find the Missing Operation
Factor Tree
Collision Coordinates
Greatest Common Factor: Easy
Solve the Word Problems
Run Errands Efficiently: Practice Coordinates
Skill Practice: Finding the GCF
Prime Factorization
Time Capsules: Practice Coordinates
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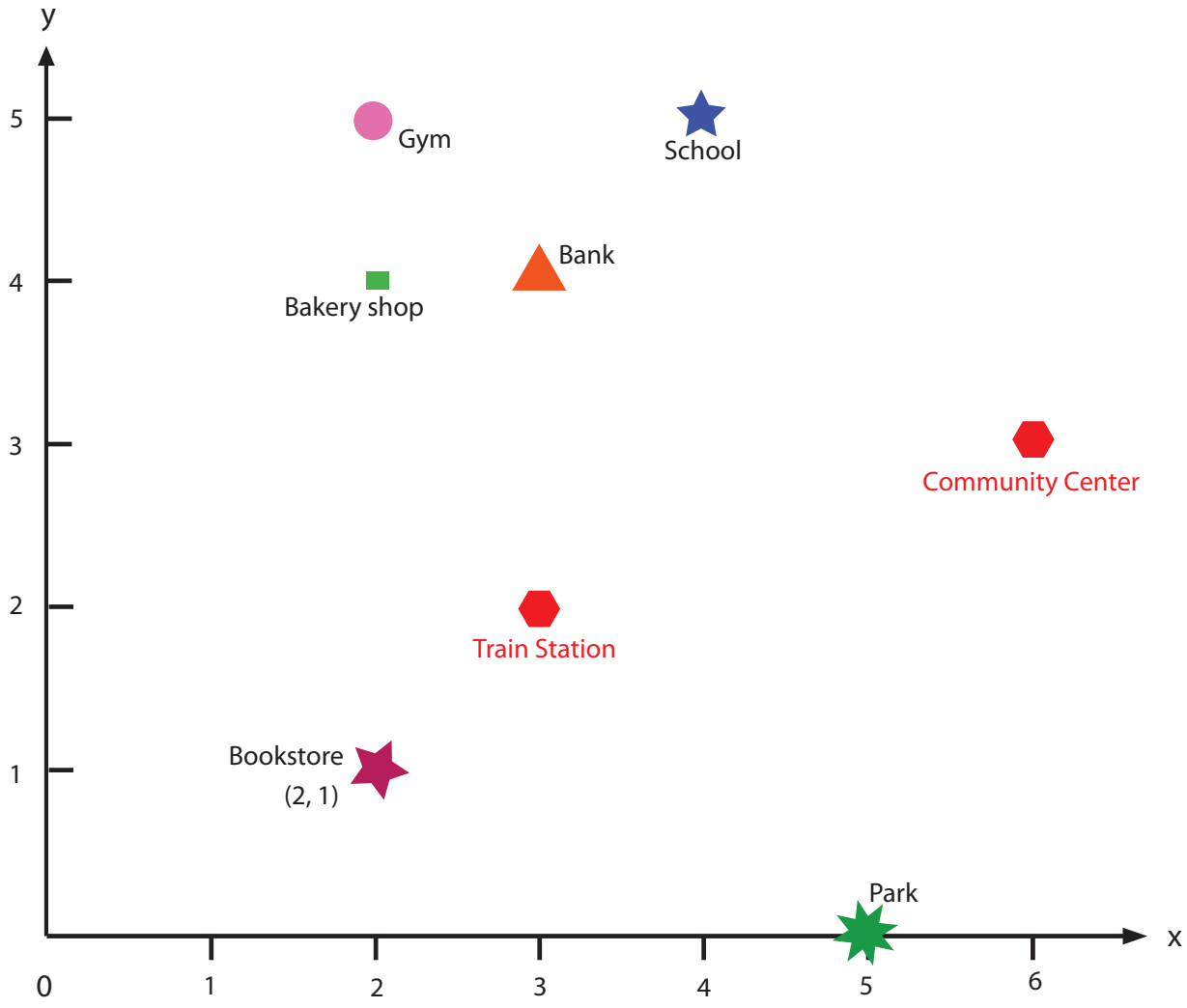
Air Show: Practice Coordinates
Least Common Multiple: Hard
Greatest Common Factor: Hard

Answer Sheet

Answer Sheet

Where are they?: Tell the position

Your friend is new in town. Tell her positions of a store, bank, and school using X and Y Coordination.
Write the coordinates of each place next to the position (look at the example).
Then, answer questions below.
Review: The first number refers to X coordinate. The second number refers to Y coordinate.



What is the x-coordinate of the school? 4

What is the y-coordinate of the park? 0

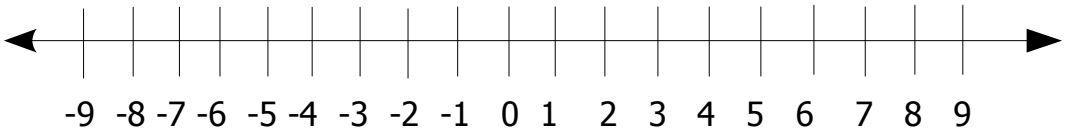
Mark on a grid a position of a train station which is (3, 2).

Mark on a grid a position of a community center which is (6, 3).

Answer Sheet

Introduction to Integers (answer sheet)

Fill in the missing numbers to complete the number line.



Fill in the blanks with neutral, positive or negative.

Zero is a ____NEUTRAL_____ integer.

A whole number less than zero is a ___NEGATIVE____ integer.

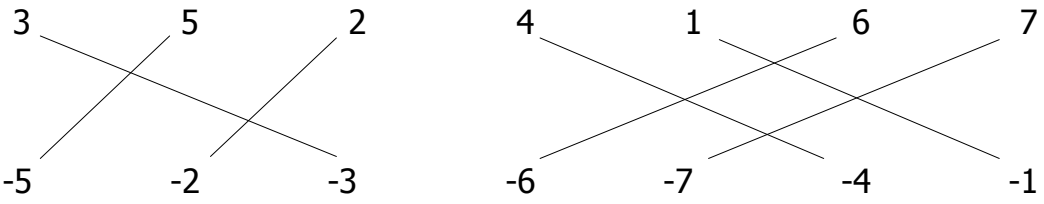
A whole number greater than zero is a ___POSITIVE_____ integer.

Whole numbers that are ____POSITIVE_____ integers can be written with or without a sign.

Circle the integers.

-4 ½ 3 -2 0 ¾ +6 8 -7 ¼ 1 +9

Match the opposite integers.



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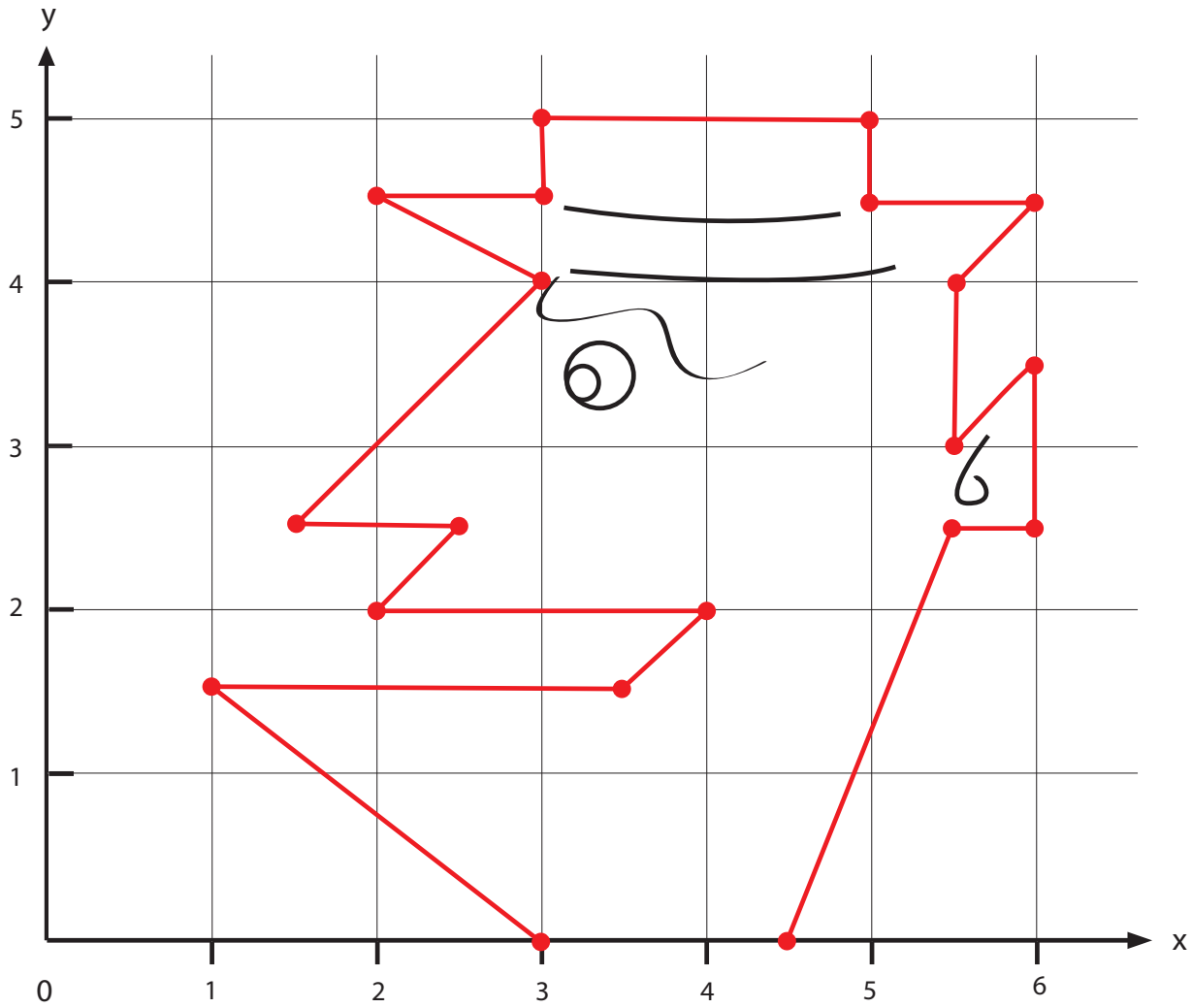
Answer Sheet

Answer Sheet

Plot a dot, Draw a line, What do you find?

Can you find the hiddden image? Plot the coordinates in order, draw a line between each one, and see what figure appears! Remember, the first number is on the X axis and the second number is on the Y axis.

1. (3, 0)	9. (2, 4.5)	17. (6, 3.5)
2. (1, 1.5)	10. (3, 4.5)	18. (6, 2.5)
3. (3.5, 1.5)	11. (3, 5)	19. (5.5, 2.5)
4. (4,2)	12. (5,5)	20. (4.5, 0)
5. (2,2)	13. (5, 4.5)	
6. (2.5, 2.5)	14. (6, 4.5)	
7. (1.5, 2.5)	15. (5.5, 4)	
8. (3, 4)	16. (5.5, 3)	



Answer Sheet

Math
Algebra

Finding Factors

Answer Sheet

Factors are numbers that you multiply together to get another number.
For example, 2 multiplied by 4 equals 8. So 2 and 4 are the factors of 8.

Find the factors of the numbers below. See the example.

10 = 2 x 5

18 = 3 x 6

24 = 4 x 6

30 = 5 x 6

32 = 4 x 8

39 = 3 x 13

Find the missing factors.

15 = 3 x 5

21 = 3 x 7

45 = 9 x 5

42 = 7 x 6

---

36 = 2 x 2 x 3 x 3

60 = 2 x 3 x 2 x 5

75 = 5 x 3 x 5

* When the factor is a prime number, it is called a prime factor.

Answer Sheet

Math
Algebra

Answer Sheet
Least Common Multiple: Easy

A *multiple* is the product of two integers. To find the multiples of a certain number, multiply that number by every integer, starting with 1.
Example: The multiples of 2 are 2, 4, 6, 8, 10, and so on.

Common multiples are numbers that share one or more of the same multiples.
Example: Multiples of 2 are 2, 4, 6, 8, 10, 12, and so on.
Multiples of 3 are 3, 6, 9, 12, 15, and so on.
6 and 12 appear in these lists, so they are common multiples of 2 and 3.

Least common multiple (LCM) is the smallest common multiple of two or more numbers.
From the example above, the LCM of 2 and 3 is 6.
LCM can be found by listing the multiples and looking for the smallest common one in the lists.

Circle the common multiples of the pair of numbers, then answer the questions.

Multiples of 4 = 4, 8, 12, 16, 20 ...
Multiples of 5 = 5, 10, 15, 20, 25, ...

The common multiple is: 20 .
The LCM is 20 .

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42 ...
Multiples of 7 = 7, 14, 21, 28, 35, 42, 49, ...

The common multiple is: 42 .
The LCM is 42 .

Multiples of 8 = 8, 16, 24, 32, 40, ...
Multiples of 10 = 10, 20, 30, 40, 50, ...

The common multiple is: 40 .
The LCM is 40 .

Multiples of 9 = 9, 18, 27, 36, 45, 54, 63, ...
Multiples of 12 = 12, 24, 36, 48, 60, 72, ...

The common multiple is: 36 .
The LCM is 36 .

Fill in the blanks and find the least common multiples below.

Multiples of 2 = 2, 4 , 6 , 8 , 10 , 12, ...
Multiples of 3 = 3, 6 , 9 , 12 , 15 , 18, ...

The common multiples are: 6 and 12 .
The LCM is 6 .

Multiples of 3 = 3, 6 , 9 , 12 , 15 , 18 , 21 , 24, ...
Multiples of 4 = 4, 8 , 12 , 16 , 20 , 24 , 28 , 32, ...

The common multiples are: 12 and 24 .
The LCM is 12 .

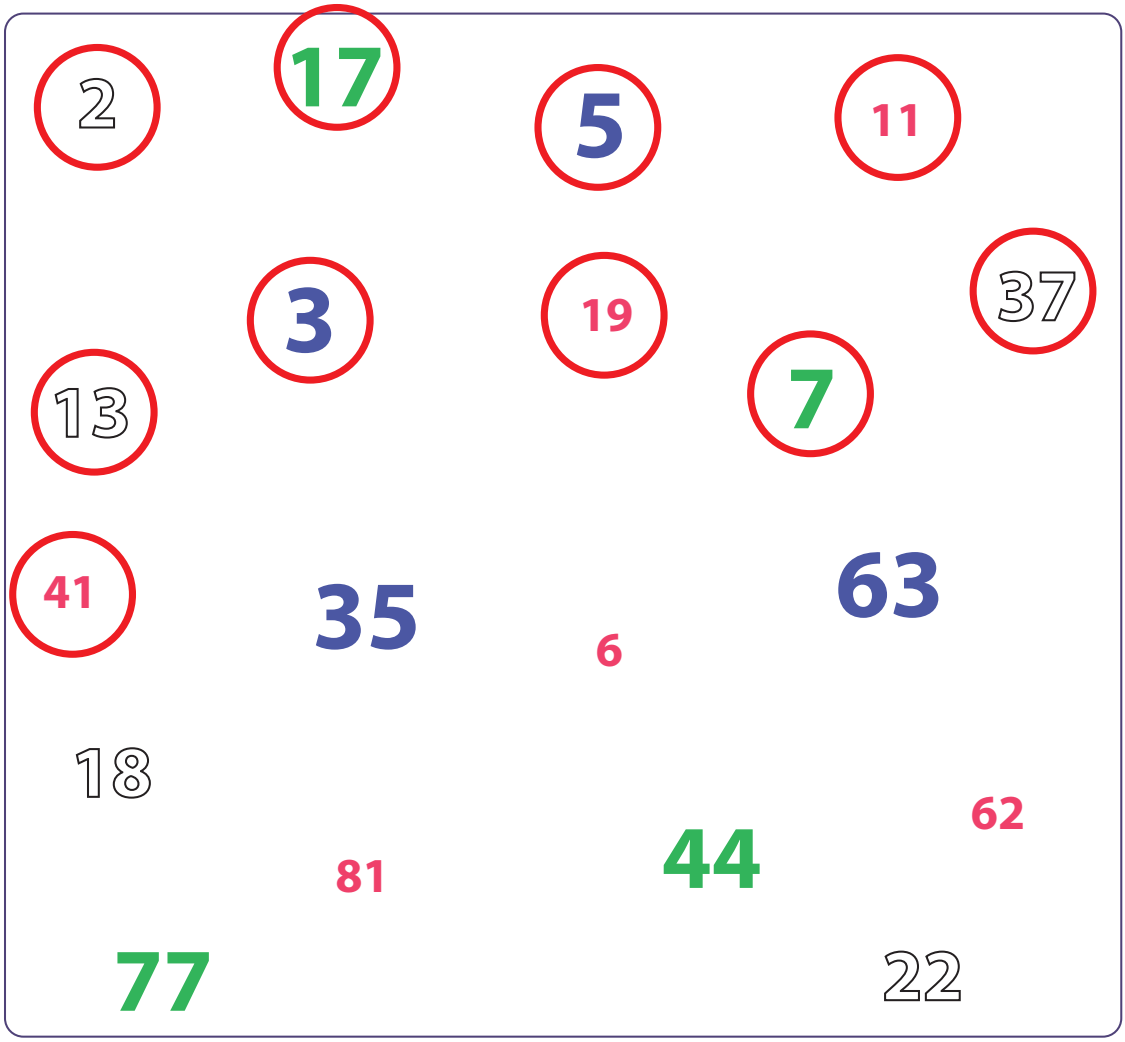
Answer Sheet

Math
Numbers

Answer Sheet

Prime Numbers

A prime number is a whole number that can only be divided evenly by 1 or itself. For example, 2 is a prime number because the only numbers that it can be divided by evenly are 2 and 1. Circle all the prime numbers in the box below.



Circle the bags that contain a prime number of gumdrops.

Answer Sheet

4th Grade
Math
Calculation

Answer Sheet
Find The Missing Operation #2

Add the operation symbols: addition(+), subtraction(-), multiplication(x), or division(÷) to complete the equation.

(8 - 5) + 6 = 9

(7 + 4) + 7 = 18

(12 + 6) − 4 = 14

(22 - 3) − 9 = 10

(3 x 7) + 4 = 25

(6 x 5) + 3 = 33

(4 x 2) x 6 = 48

(3 x 3) + 2 = 11

(30 - 15) ÷ 3 = 5

(10 - 2) x 7 = 56

(24 - 10) x 1 = 14

(7 x 7) + 3 = 52

(100 - 80) ÷ 4 = 5

(45 - 18) ÷ 9 = 3

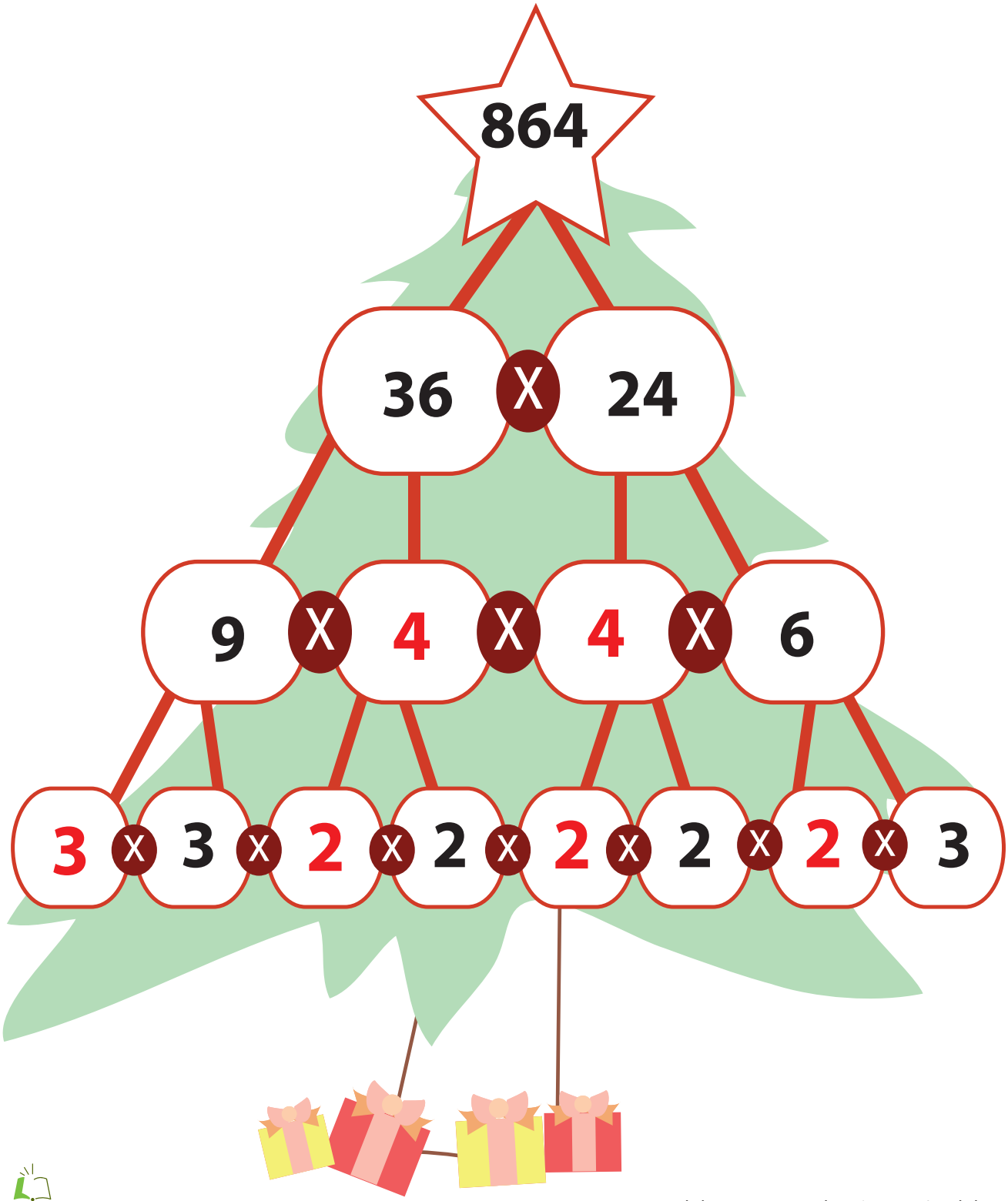
Answer Sheet

Math
Algebra

Factor Tree

Answer Sheet

Factors are numbers that you multiply together to get another number. Every number can be broken down into factors. Complete the factor tree below by filling in the missing factors.



Answer Sheet

Collision Coordinates

Answer Sheet

4TH GRADE
LINEAR MATH

Balloons and birds are on a collision course in the sky! When their paths cross, the balloons pop! Plot 10 points for each of the 4 linear equations using the T-charts given. Graph each line on the x-y coordinates and answer the questions on the right.

Red balloon
$y = 2x - 24$

x	y
12	0
13	2
14	4
15	6
17	10
19	14
20	16
21	18
23	22
24	24

Green balloon
$y = 3x - 75$

x	y
25	0
26	3
27	6
28	9
29	12
30	15
31	18
32	21
33	24
34	27

Orange bird
$y = {}^{x}/_{2} + 6$

x	y
0	6
2	7
4	8
6	9
8	10
10	11
14	13
18	15
22	17
24	18

Blue bird
$y = {}^{x}/_{4} + 13$

x	y
0	13
4	14
8	15
12	16
16	17
20	18
24	19
28	20
32	21
36	22

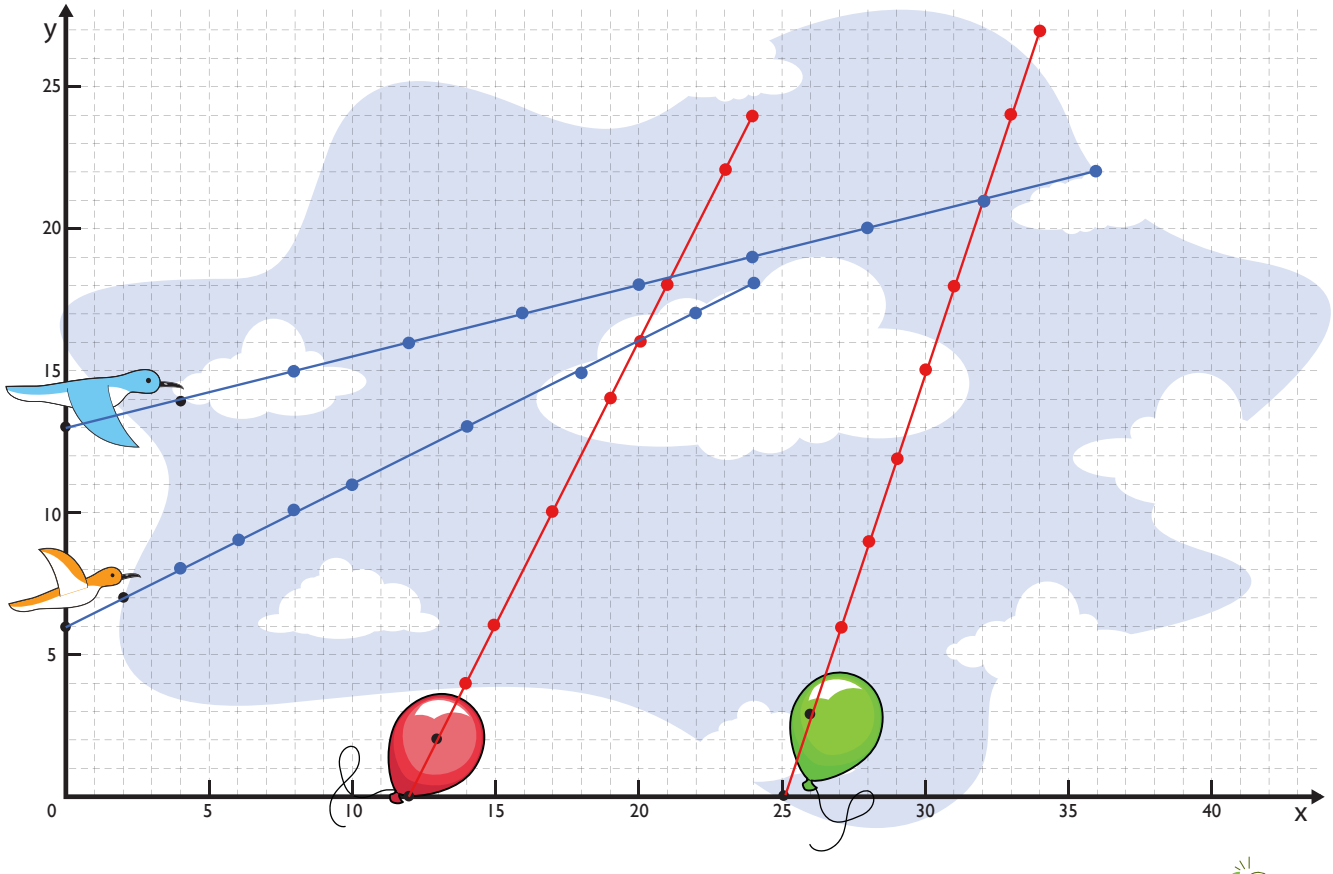
At what coordinate (x,y) does the orange bird pop the red balloon?

(20 , 16)

At what coordinate (x,y) does the blue bird pop the green balloon?

(32 , 21)

← Coordinate answers will vary depending on choice of X.



Answer Sheet

Math
Algebra

Answer Sheet
Greatest Common Factor: Easy

Greatest Common Factor (GCF) is the largest factor that divides two numbers.

Example: Find the greatest common factor of 6 and 10.

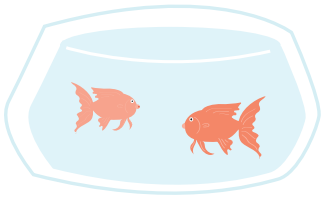
1. Find the prime factors of each number.

   6 = 2 x 3
   10 = 2 x 5

2. Find the common prime factors that 6 and 10 have.

   6 = 2 x 3
   10 = 2 x 5

3. The common prime factor of 6 and 10 is 2.



Circle the common factors of the pair of numbers, then answer the questions.

4 = 2 x 2
6 = 2 x 3

The common prime factor is: 2 .
The GCF is 2 .

6 = 2 x 3
9 = 3 x 3

The common prime factor is: 3 .
The GCF is 3 .

10 = 2 x 5
12 = 2 x 2 x 3

The common prime factor is: 2 .
The GCF is 2 .

14 = 2 x 7
35 = 5 x 7

The common prime factor is: 7 .
The GCF is 7 .

Greatest common factor can also be found by *multiplying all the common prime factors*. See the example.

18 = 2 x 3 x 3
12 = 2 x 2 x 3

The common prime factors are 2 and 3 .
The GCF is 2 x 3 = 6 .

20 = 2 x 2 x 5
30 = 2 x 3 x 5

The common prime factors are 2 and 5 .
The GCF is 2 x 5 = 10 .

Answer Sheet

Solve the word problems. Show your work and circle your answers.

1. Joey and his family are taking a road trip. On Monday, they travel 68 miles. On Tuesday, they travel 25. On Wednesday, they travel 33 miles. What is the average number of miles they drove per day?


```
  68
  25
+ 33
-----
 126
```

```
     42
   -----
3 ) 126
```

2. Joey has three brothers: Jonathan, Jacob, and Jack. Jacob is older than Jonathan but younger than Joey. Jack is younger than Jonathan. List the four boys in order from oldest to youngest.

Joey
Jacob
Jonathan
Jack

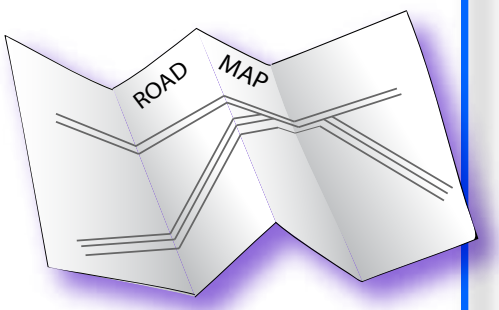
3. Joey wants to figure out how many minutes his family has spent on the road. On Monday, they traveled for 3 hours. They drove for 1 1/2 hours on Tuesday and another 1 1/2 hours on Wednesday. How many minutes have they traveled in all?

3 hours + 1 1/2 hours + 1 1/2 hours
= 6 hours

```
  60 minutes
x  6 hours
-----------
360 minutes
```

4. Joey and his family plan to visit the Grand Canyon, Yellowstone National Park, and the Washington Monument. They will travel 1,323 miles to get to the Grand Canyon. From there, they'll drive 846 miles to Yellowstone. Finally, they will travel 2,166 miles to get to the Washington Monument. How many miles will they travel altogether?

```
  1,323
    846
+ 2,166
-------
  4,335
```

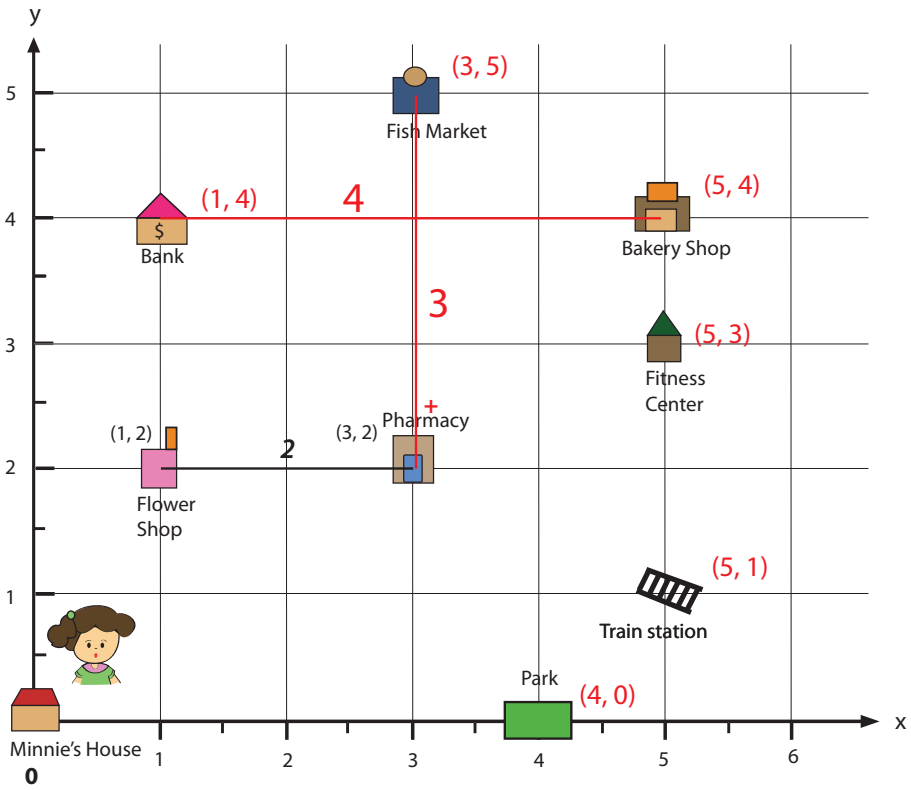


Answer Sheet

Answer Sheet
Run Errands Efficiently: Practice Coordinates

Help Minnie run errands by telling her how far it is between each location. To find the distances between the coordinates, subtract the x-values and/or the y-values (see an example).

Review: The first number refers to X coordinate. The second number refers to Y coordinate.



Example:
Distance between Pharmacy (3, 2) and Flower shop(1, 2). Subtract difference of X-value of each location. X value of Pharmacy = 3, X value of Flower shop = 1.
Therefore, the distance is 3 - 1 = 2.

1. How far between the pharmacy and the fish market?
   Pharmacy (3, 2)
   Fish Market (3, 5)
   $5 - 2 = 3$

2. How far between the bank and the bakery shop?
   Bank (1, 4)
   Bakery (5, 4)
   $5 - 1 = 4$

3. Which one is greater in distance - Minnie's house to the park, or the train station to the bakery shop?
   Minnie's House (0, 0)
   Park (4, 0)
   $4 - 0 = 4$
   Train Station (5, 1)
   Bakery (5, 4)
   $4 - 1 = 3$
   Minnie's House to the Park

4. If Minnie travels from the flower shop to the bank, then to the bakery shop, and stops at the fitness center, how far has she traveled?

   Flower Shop (1, 2)
   Bank (1, 4)
   $4 - 2 = 2$

   Bank (1, 4)
   Bakery (5, 4)
   $5 - 1 = 4$

   Bakery (5, 4)
   Fitness Center (5, 3)
   $4 - 3 = 1$

   $2 + 4 + 1 = 7$

Answer Sheet

Answer Sheet

MATH FRACTIONS

Skill Practice 1

Finding the GCF

*The **greatest common factor (GCF)** is the largest whole number that divides evenly into multiple numbers.*
Look at the two numbers in each problem and find the greatest common factor between them. See the example below for a step by step process to finding the GCF.

Example

36	48
2	2
2	2
3	2
3	2
	3

36 = 18 x 2 — 2 is a prime number and divides into 18 evenly 36 times.
36 = 9 x 2 x 2 — 18 can be divided by 2, leaving 9.
36 = 3 x 3 x 2 x 2 — 9 can be divided by 3, leaving 3. Now we have all prime numbers.

48 = 24 x 2
48 = 12 x 2 x 2
48 = 6 x 2 x 2 x 2
48 = 3 x 2 x 2 x 2 x 2

Once you find the prime factors of the second number, see which numbers they have in common. Circle and multiply them to get your GCF. If there are no prime factors in common, then the GCF is 1.

Numbers in common: **2, 2, 3**

2 x 2 x 3 = 12
GCF

40	60
2	2
2	2
2	3
5	5

20
GCF

30	75
2	3
3	5
5	5

15
GCF

84	105
2	3
2	5
3	7
7	

21
GCF

56	96
2	2
2	2
2	2
7	2
	2
	3

8
GCF

18	25
2	5
3	5
3	

1
GCF

50	125
2	5
5	5
5	5

25
GCF

72	108
2	2
2	2
2	3
3	3
3	3

18
GCF

56	112
2	2
2	2
2	2
7	2
	7

28
GCF

Math
Algebra

Answer Sheet

Prime Factorization

Factors are numbers that you multiply together to get another number. When a factor is a prime number, it is called a prime factor. For example, the prime factors of 12 are 2 x 2 x 3. So 2, 2, and 3 are prime factors of 12.

Find the prime factors of the numbers below. See the example.

16 = 2 x 8
= 2 x 2 x 4
= 2 x 2 x 2 x 2

---

36 = 4 x 9
= 2 x 2 x 3 x 3

---

48 = 4 x 12
= 2 x 2 x 2 x 6
= 2 x 2 x 2 x 2 x 3

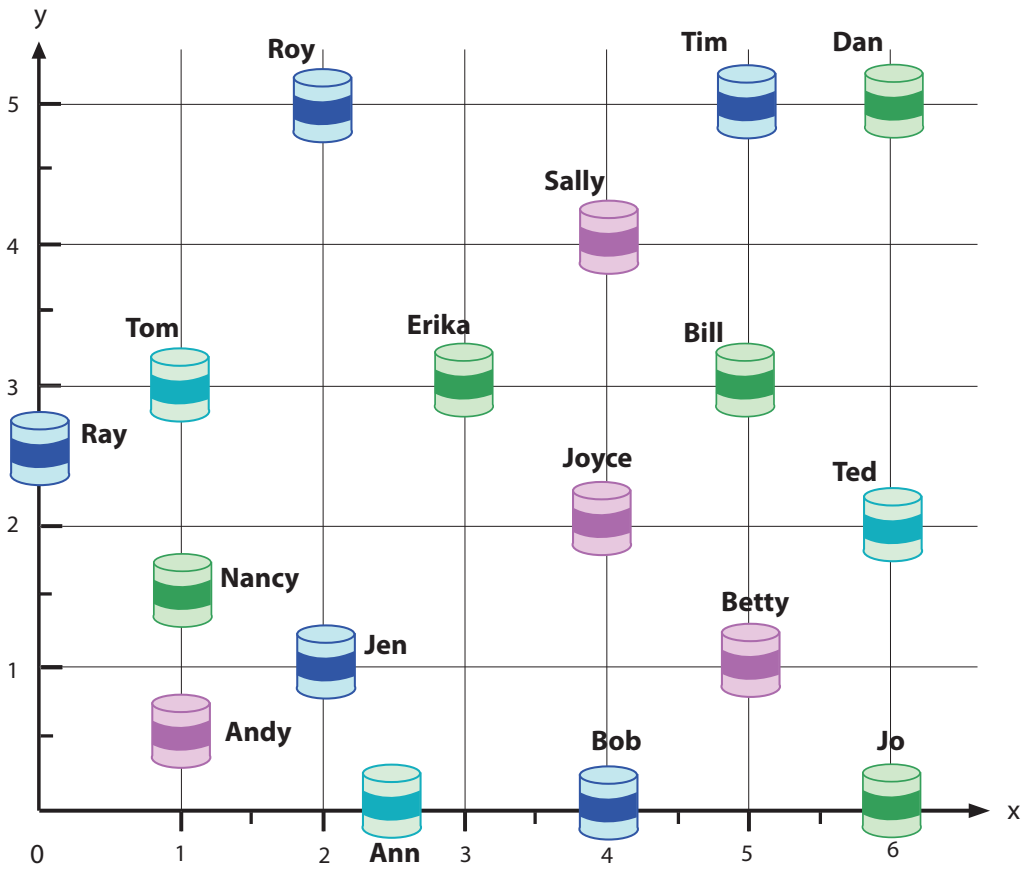
---

56 = 7 x 8
= 7 x 2 x 4
= 7 x 2 x 2 x 2

Answer Sheet

Answer Sheet
Time Capsules: Practice Coordinates

Your friends need your help in writing code to show where they buried their time capsules, so later they will remember where they are.



Roy = (2, 5)
Bill = (5, 3)
Jo = (6, 0)
Andy = (1, 0.5)
Tom = (1, 3)
Jen = (2, 1)
Ray = (0, 2.5)
Betty = (5, 1)
Tim = (5, 5)
Erika = (3, 3)
Joyce = (4, 2)
Dan = (6, 5)
Ann = (2.5, 0)
Nancy = (1, 1.5)
Ted = (6, 2)
Bob = (4, 0)
Sally = (4, 4)

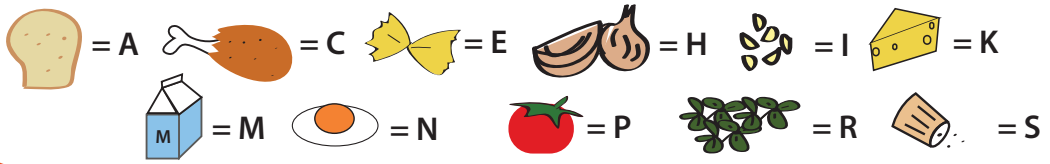
Answer Sheet

Answer Sheet

My Lunch Box: Practice Coordinates

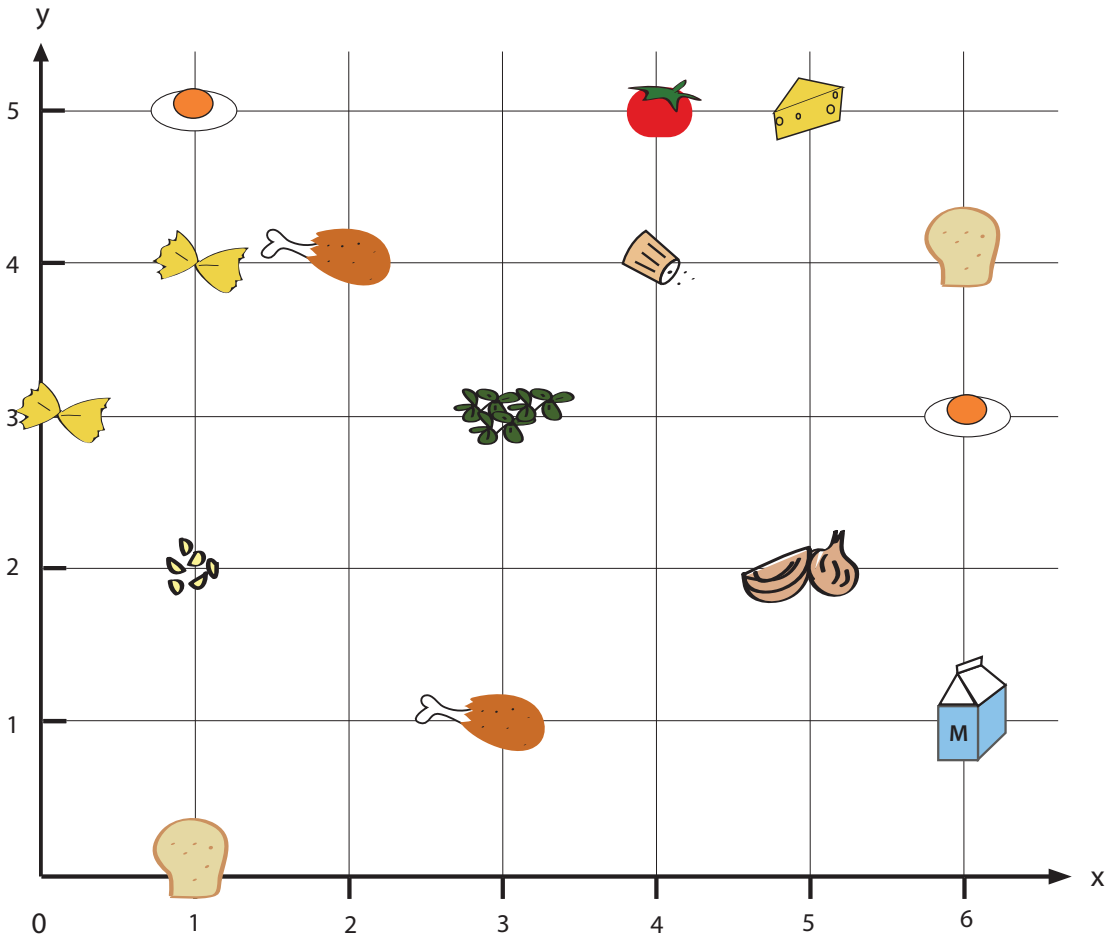
Use the coordinates that go with the ingredients to find the letters that spell out what is in the lunch box.

Ingredients



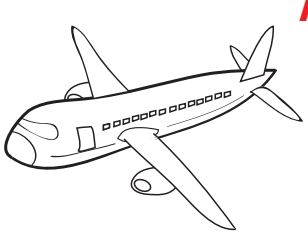
Coordinates

1. (2, 4)	4. (3, 1)	7. (6, 3)	10. (3, 3)	13. (4, 4)
2. (5, 2)	5. (5, 5)	8. (4, 5)	11. (6, 1)	14. (6, 4)
3. (1, 2)	6. (0, 3)	9. (1, 0)	12. (1, 4)	15. (1, 5)



Answer: CHICKEN PARMESAN

Answer Sheet



Answer Sheet

Air Show: Practice Coordinates

The pilots practice flying skills to prepare for the upcoming air show. Help each pilot organize his positions by plotting his coordinates in the grid below and drawing a line to connect each dot of his route. Use a different color for each pilot.

Pilot A

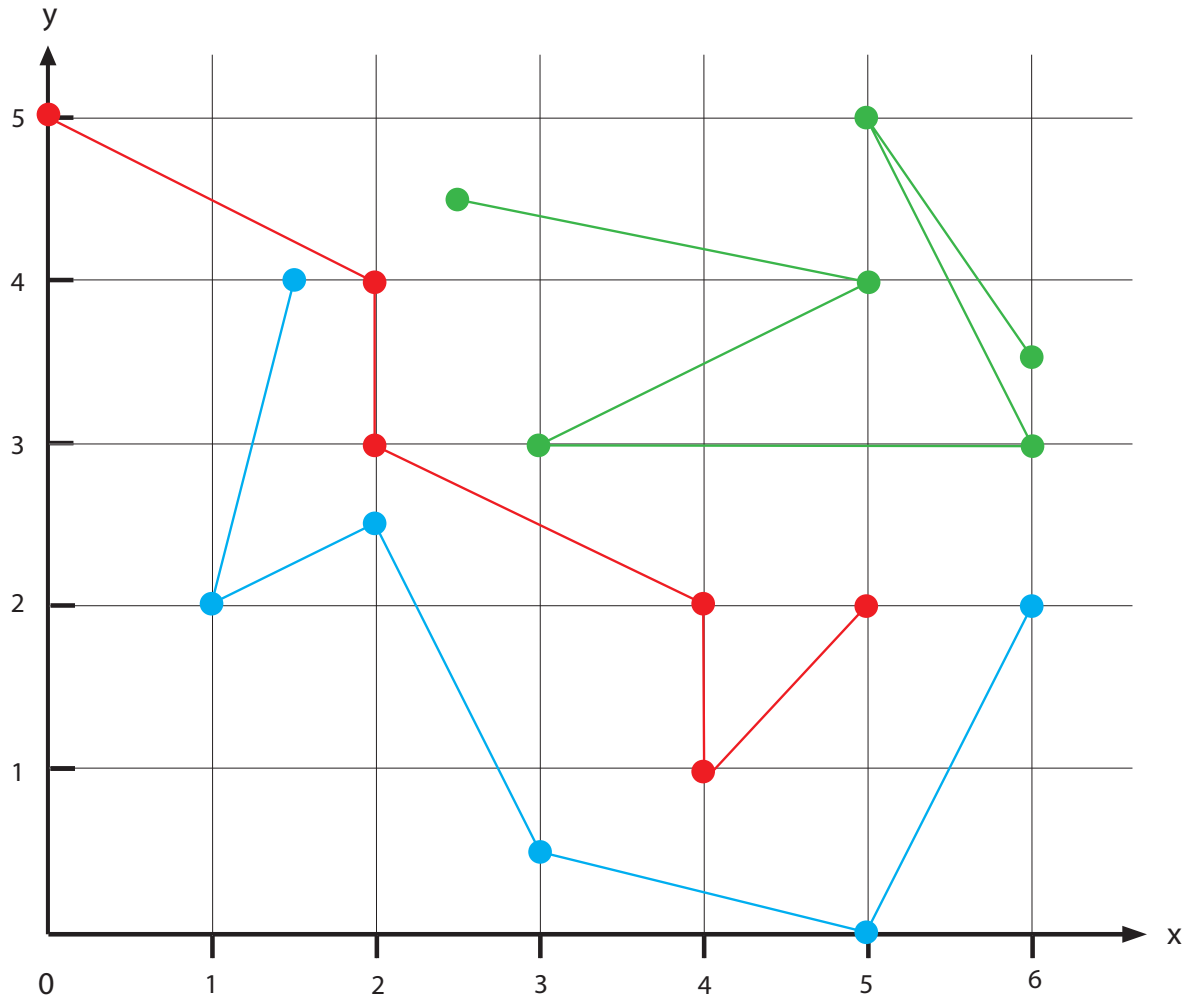
1. (0, 5)
2. (2, 4)
3. (2, 3)
4. (4, 2)
5. (4, 1)
6. (5, 2)

Pilot B

1. (2.5, 4.5)
2. (5, 4)
3. (3, 3)
4. (6, 3)
5. (5, 5)
6. (6, 3.5)

Pilot C

1. (1.5, 4)
2. (1, 2)
3. (2, 2.5)
4. (3, 0.5)
5. (5, 0)
6. (6, 2)



Answer Sheet

Math
Algebra

Answer Sheet
Least Common Multiple: Hard

A *multiple* is the product of two integers. To find the multiples of a certain number, multiply that number by every integer, starting with 1.
Example: Multiples of 10 are 10, 20, 30, 40, 50, and so on.

Common multiples are numbers that share two or more of the same multiples.
Example: Multiples of 10 are 10, 20, 30, 40, 50, 60, and so on.
Multiples of 15 are 15, 30, 45, 60, 75, and so on.
30 and 60 appears in these lists, so they are common multiples of 10 and 15.

Least common multiple (LCM) is the smallest common multiple of two or more numbers.
From the example above, the LCM of 10 and 15 is 30.
LCM can be found by listing all the multiples and looking for the smallest common one in the lists.

Find the least common multiple of numbers below. Follow the directions.

Multiples of 9 = 9, 18, 27, 36, 45, 54, ...

Multiples of 15 = 15, 30, 45, 60, 75, 90, ...

The common multiple is 45. The LCM is 45.

Multiples of 20 = 20, 40, 60, 80, 100, 120, ...

Multiples of 30 = 30, 60, 90, 120, 150, 180, ...

The common multiples are 60 and 120. The LCM is 60.

Multiples of 10 = 10, 20, 30, 40, 50, 60, ...

Multiples of 20 = 20, 40, 60, 80, 100, 120, ...

Multiples of 50 = 50, 100, 150, 200, 250, 300, ...

The common multiples are 100. The LCM is 100.

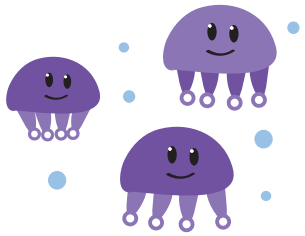
Math
Algebra

Answer Sheet
Greatest Common Factor: Hard

Greatest Common Factor (GCF) is the largest factor that divides two numbers.

Example: Find the greatest common factor of 24 and 18.

1. Find the prime factors of each number.



$24 = 6 \times 4$
$= 2 \times 3 \times 2 \times 2$

$18 = 6 \times 3$
$= 2 \times 3 \times 3$

2. Find the common prime factors of 24 and 18.

$24 = 2 \times 3 \times 2 \times 2$

$18 = 2 \times 3 \times 3$

3. The common prime factors of 24 and 18 are 2 and 3. The greatest common factor can be found by *multiplying all the common prime factors*. Therefore, the greatest common factor of 24 and 18 is 2 x 3 = 6.

Find the greatest common factor of the numbers below.

$30 = 3 \times 2 \times 5$

$45 = 3 \times 3 \times 5$

The common prime factors are: 3 and 5 . The GCF is 15 .

$36 = 3 \times 2 \times 2 \times 3$

$42 = 7 \times 2 \times 3$

The common prime factors are: 2 and 3 . The GCF is 6 .

$120 = 2 \times 2 \times 3 \times 5 \times 2$

$100 = 2 \times 5 \times 2 \times 5$

The common prime factors are: 2, 2 and 5 . The GCF is 2 x 2 x 5 = 20 .