May 22, 2023

Dear Parents of Incoming 7th Graders,

I am asking for your help in encouraging your child over the summer to continue their success in mathematics and to see math as a useful and practical way of relating it to everyday situations. A good example would be when you go out to eat. Ask your child to figure out what the tip would be to leave for the waitress/waiter. Many students think math is just a matter of talent. Yet we know from studies that success in math results from the effort you make and the learning habits that you have developed. Most math concepts are built on what we have learned earlier.

I have informed your child of how they can continue to keep their math skills up to the standards needed for the upcoming 7th grade year. **They marked workbook pages (300-314) to be completed.** These are concepts that were covered in the year and need continued practice. They were asked to show their work and NOT to use calculators.

By working on these pages over the summer, I hope students will come to a new school year in math with confidence about their work and to learn to reason and communicate more effectively with old and new concepts in mathematics.

Thank you,

Michelle Baldwin

Michelle Baldwin

Dear Student,

Pages 300–314 of this workbook have Performance Tasks that let you show your understanding of the Common Core math taught in *Progress in Mathematics.*

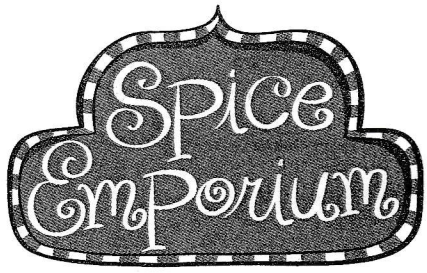
Each performance task has five parts. The content of each part meets the Common Core State Standards (CCSS) for *Progress in Mathematics* lessons. The goal of each performance task is for you to apply critical thinking skills and various problem-solving strategies to the math content learned in the chapters. The Performance Tasks are useful tools for evaluating your understanding of Grade 6 math and the Common Core State Standards. You will find the Performance Tasks on the following pages.

Your teacher will use a rubric in the Teacher's Edition of this workbook to record your understanding of Common Core State Standards.

Performance Task 1

Spice Emporium

Name _____



1 Lena works at Spice Emporium, a store that sells spices from all over the world. Today she is preparing a mixture of spices for Turkish dishes. She uses 3.58 ounces of salt, 2.4 ounces of cumin, 1.25 ounces of black pepper, 1.1 ounces of oregano, 0.74 ounce of paprika, and 0.5 ounce of cayenne pepper.

A. Ms. McDonald wants to buy 9.25 ounces of the spice mix for her Turkish recipes. How much spice mix will Lena have left?

Another customer wants to buy 6.5 ounces of thyme. The canister of thyme has t ounces. Lena measures out the customer's order and puts the canister back. Later, she replenishes the thyme in the canister with 10.75 ounces.

B. Write an expression for the amount of thyme in the canister now. If the canister started with 8.1 ounces of thyme, how much is in the canister now?

Performance Task 1
Duplicating Spices

Name _____

2 Malik also works at Spice Emporium. His manager asks him to put 1.35 ounces of salt, 0.8 ounce of pepper, and 0.09 ounce of saffron in each of 100 bags.

A. How much salt does Malik need? How much pepper? How much saffron?

Malik is making 36 small packs of chili spices and 15 large packs of chili spices. A small pack contains 2.35 ounces of spices. A large pack contains 10.8 ounces of spices.

B. How many ounces of chili spices should Malik make?

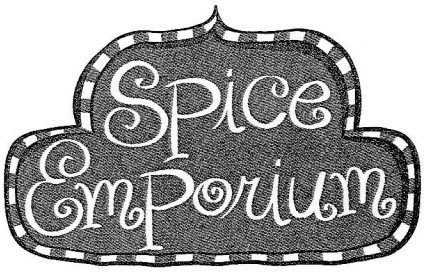
The jar of oregano contains 9.6 ounces of this most popular spice. Ms. Asher buys 3.75 ounces of the oregano. Then Mr. King buys 0.6 as much oregano as Ms. Asher bought.

C. How much oregano is left in the jar?

Performance Task 1

Separating Spices

Name _____



3 Lena mixed 12.5 ounces of basil, 8.42 ounces of rosemary, 7.6 ounces of tarragon, and 20.25 ounces of a black pepper and sea salt mixture. She wants to separate the mixture equally into 100 bags.

A. Can Lena use bags that can hold 0.4 ounce of spices or bags that can hold 0.5 ounce?

Spice Emporium received a shipment of 41.92 pounds of curry powder. Lena stored half the curry powder in the basement. Then she separated the other half equally into 4 boxes.

B. How much curry powder did Lena put in each box?

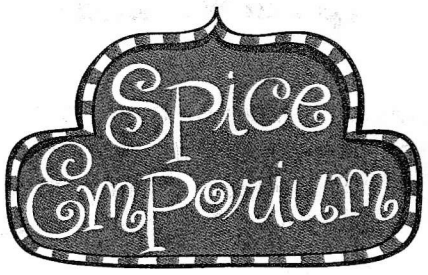
A jar contained p ounces of paprika. Malik separated the paprika equally into packets. Each packet had 0.8 ounce of paprika.

C. Write an expression for the number of packets Malik filled with paprika. If the jar contained 116.8 ounces of paprika, how many packets did Malik prepare?

Performance Task 1

The Business of Spices

Name _____



4 Spice Emporium has a mailing list of customers. The mailing list started with 7 customers four months ago. The number of customers has doubled each month. Malik needs to mail a letter to the customers on the list.

A. Write and evaluate an expression for the number of copies of the letter Malik will mail.

Today n customers each bought a 0.5-ounce packet of saffron. Half that number of customers bought 3-ounce packets of saffron.

B. Suppose 12 customers bought 0.5-ounce packets of saffron. Write an expression for the amount of saffron sold to these customers. Then find how much saffron was sold in all.

Spice Emporium has a sale on cinnamon and nutmeg. Twenty-six customers each bought a jar of cinnamon and a jar of nutmeg. Eight customers bought only jars of cinnamon. Lena wrote an expression for the number of jars of cinnamon sold (c), and the number of jars of nutmeg sold (n).

$26(c + n) + (8 \times c)$

C. Simplify her expression.

Performance Task 1

A Typical Workday

Name _____

5 Malik is mixing cayenne pepper, black pepper, and garlic powder. He puts 0.8 ounce of cayenne pepper and 0.7 ounce of black pepper in a bag. The bag can hold up to 2.2 ounces of spices.

A. Write an inequality for the amount of garlic powder (g) Malik can put in the bag. Can Malik put 0.8 ounce of garlic powder in the bag? Explain your reasoning.

Lena filled some jars with curry powder. She put 1.6 ounces of curry powder in each of the jars. She used a total of 20.8 ounces of curry powder.

B. Write and solve an equation for the number of jars Lena filled with curry powder.

Malik stocked some packages of sea salt on a shelf. Customers purchased 25 of the packages. At the end of the day, there were 8 packages still on the shelf.

C. Write and solve an equation for the number of packages of sea salt that Malik stocked on the shelf.

Performance Task 2

Polar Expedition

Name _____

1 Terence and Lilly are working with a team of scientists in the Arctic. Yesterday Terence and Lilly collected water samples from the ocean. The table shows the depths of their samples.

A. Plot the depths of the water samples on the number line. Label each point. Order the samples from shallowest to deepest.

Water Sample	Depth (meters below sea level)
A	−6
B	−2
C	0
D	−3

Lilly woke up at midnight and saw that the temperature was −4°C. When she got up at 7 A.M., the temperature was −6°C.

B. Which hour was colder? Explain your reasoning. Write an inequality for the temperatures.

A beluga whale swam at a depth of −38 meters. An ivory gull flew at a height of 26 meters.

C. Which animal was closer to the surface of the ocean? Write an inequality to compare the absolute values.

Performance Task 2

A Cold Trip Ashore

Name _____

2 Terence is packing knapsacks with sample jars for scientists who are going to explore a rocky beach. He is given two boxes of different size jars. One box contains 14 large sample jars. A second box contains 35 small sample jars. Both sizes of sample jars should be shared equally among the scientists.

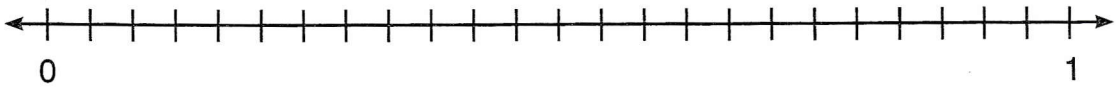
A. How many scientists can Terence pack for? How many large jars and small jars should Terence put in each knapsack?

An ornithologist captured and examined some Arctic terns. She measured the lengths of the tern's bills before releasing them.

B. The table to the right shows the bill lengths of four terns.

- Rename each fraction using the LCD.
- Plot the bill lengths on the number line. Label each point.
- Order the terns from shortest to longest bill length.

Arctic Tern	Bill Length (inches)
A	$\frac{3}{4}$
B	$\frac{7}{8}$
C	$\frac{11}{12}$
D	$\frac{2}{3}$



Performance Task 2
Record Keeping

Name _____

3 Lilly is cutting labels from two strips of white tape. The first strip is $\frac{4}{5}$ meter long. The second strip is $\frac{3}{10}$ meter long. Each label must be $\frac{1}{20}$ meter long.

A. How many labels can Lilly cut from the two strips?

Here are some strategies you can use.

- Draw a diagram.
- Use the relationship between multiplication and division.
- Use the reciprocal of the divisor.

A jar contains preserving liquid. Terence needs to measure equal amounts of the liquid into bottles for biological specimens. Each bottle can hold $1\frac{3}{8}$ ounces of preserving liquid.

B. Write an expression for the number of bottles Terence can fill with preserving liquid. If the jar originally had $24\frac{3}{4}$ ounces of preserving liquid, how many bottles can Terence fill?

Performance Task 2
Egg Data

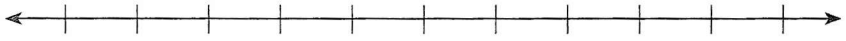
Name _____

4 Lilly and Terence helped the ornithologist survey a colony of horned puffins. Horned puffins are seabirds that only come ashore to nest.

A. The box below shows Lilly and Terence's data for the eggs they measured.

Horned Puffin Egg Lengths (mm)
74, 71, 70, 72, 72, 73, 67, 73, 73, 75, 73, 74

- Make a line plot for the data.
- Identify any outliers.
- Find the mean, median, mode, and range of the data.
- Explain how the outlier affects the mean.
- Write a statistical question that could be answered by looking at your line plot.



Performance Task 2

What Is the Mass of that Horned Puffin?

5 Horned puffins need plenty of food to raise their chicks. A well-fed puffin has a greater mass than a puffin that can't find enough to eat. Lilly and Terence helped the ornithologist capture adult puffins and measure their masses. The box below shows the team's data.

Horned Puffin Masses (grams)
610, 645, 594, 631, 625, 607, 652, 630, 628, 582, 605, 649, 633, 626, 618, 655, 622, 643

A. Complete the frequency table for the data. Then use your frequency table to complete the histogram.

Mass (g)	Tally	Frequency

B. Use the histogram to answer the questions below.

- How many puffins were measured? _____
- Which interval of masses shows the greatest frequency? _____
- A well-fed puffin has a mass of about 620 grams. Which birds may have trouble raising chicks this year? _____
- Based on this data, how would you describe the overall health of the puffin colony?

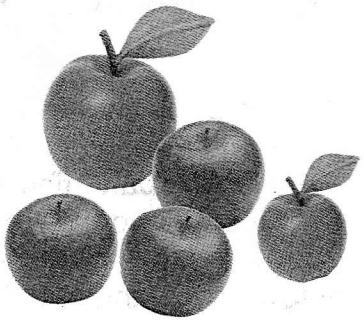
_____

_____

Performance Task 3

Name _____

Tremont Creek Farm



1 Tremont Creek Farm has a small apple orchard. Last year, the farm's 9 Golden Delicious trees produced 7,290 pounds of apples. The farm's 7 McIntosh trees produced 5,642 pounds of apples.

A. Which trees were better producers?
Here are some strategies you can use.

- Write equivalent ratios.
- Make tables to compare ratios.
- Find the unit rates.

The farm managers want to increase the production of Golden Delicious apples to at least 30,000 pounds.

B. How many more trees do they need to plant?

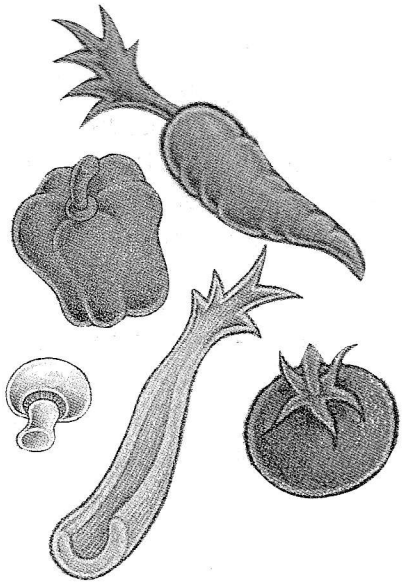
Hector just packed 294 pounds of Granny Smith apples into 7 boxes. There are 672 more pounds of apples ready to be packed.

C. How many more boxes does Hector need?

Performance Task 3

Name _____

Harvest



2 Summer harvest has begun at the farm. Four workers are packing vegetables in the barn. Six workers are picking berries. Three workers are picking tomatoes. The last 7 workers are repairing an irrigation canal.

A. What percent of the farm's workers are packing vegetables? What percent are repairing the canal?

The next day, the farm hired 30 more workers. The farm manager sent 60% of the workers to the tomato field. She sent 22% of the workers to the berry field.

B. How many workers went to the tomato field? How many went to the berry field?

Mike, a harvest worker, is assigned to pick tomatoes. He finds wormholes in 36% of the tomatoes on one plant.

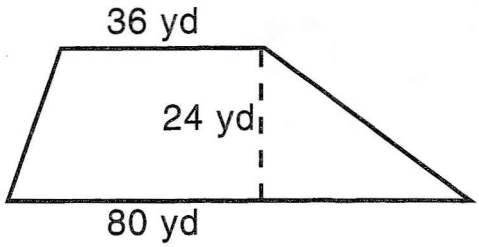
C. If Mike picked 9 tomatoes with wormholes from the plant, how many tomatoes were on the plant?

Performance Task 3

Growing Champion Pumpkins

Name _____

3 Melissa is getting ready to drive a tractor that will spread organic fertilizer on the pumpkin field. The field is shaped like a trapezoid. A drawing of the pumpkin field and some of its dimensions are shown here.



A. Melissa needs to apply 2 pounds of fertilizer for every 5 square yards. How much fertilizer should Melissa load in the tractor?
Think: Area of a trapezoid $= \frac{1}{2}(b_1 + b_2)h$.

The fertilizer is stored in a box that is shaped like a cube. It measures $3\frac{1}{2}$ feet on each edge. The box is full when Melissa starts loading the tractor.

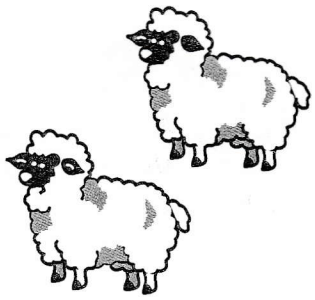
B. How much fertilizer does the box hold? Think: Volume of a cube $= e^3$.

C. If a cubic foot of fertilizer weighs 16 pounds, what percent of the fertilizer will Melissa use to fertilize the pumpkin field? Think: Round to the nearest tenth.

Performance Task 3

New Fences

Name _____



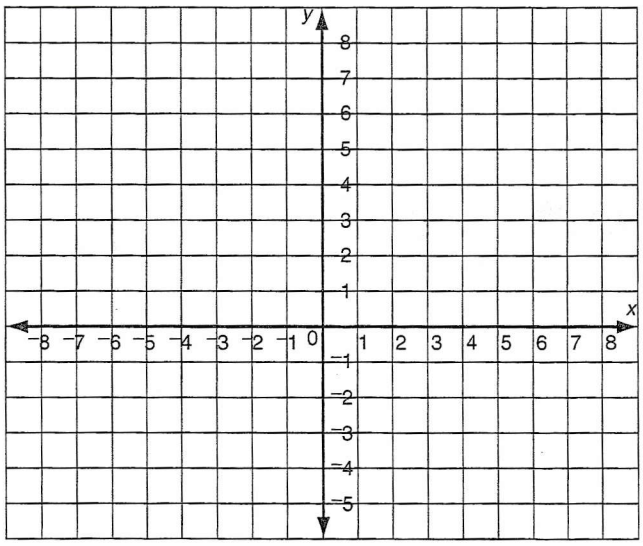
4 Hector needs to put new fences around the goat pen and the sheep pen. First he needs to draw both pens on a coordinate plane. Then he needs to figure out how much fencing to buy.

A. Help Hector complete the following.

- Graph the points for each pen. Draw each pen.
- Use absolute value to help you find the length and width of each pen.
- If each unit on the coordinate plane measures $6\frac{1}{2}$ feet on all sides, how much fencing does Hector need?

Goat pen: (−6, 2), (−2, 2), (−2, −4), (−6, −4)

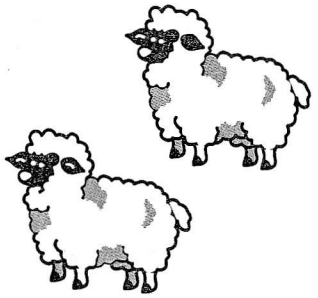
Sheep pen: (−3, 7), (5, 7), (5, 3), (−3, 3)



Performance Task 3

An Exceptional Lamb

Name _____

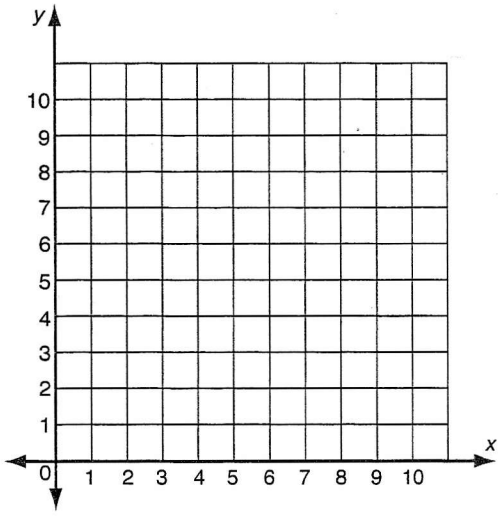


5 Melissa is raising a lamb on a special diet. She hopes to show the lamb at the county fair at the end of summer. Melissa weighs the lamb each week and discovers a rule: the lamb weighs 1 pound more than double the number of weeks.

A.
- Identify the independent and dependent variables. Explain your reasoning.
- Write an equation for Melissa's rule.
- Use the rule to complete the table below.
- Graph the ordered pairs.

Rule: _____

x	y	(x,y)
1		
2		
3		
4		



B. Assuming the lamb keeps growing at the rate given in the table, how much will it weigh in 24 weeks?