

1. Ratio & Proportion

Grade 7

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

Materials: colored cubes

1. Three classes have the same ratio of girls to boys.

In Elisa's class there are 6 girls and 5 boys.

Bert's class has 15 boys.

Karen's class has 12 girls.

- a) Use colored blocks to show the ratio of girls to boys in Elaine's class.
 - b) Using the same color of blocks for boys and girls as above set up an equivalent ratio to help you determine the number of boys and girls in Bert's class.
 - c) Determine how many boys and girls in Karen's class.
 - d) Use a drawing to record each solution.
 - e) Write the ratio using a colon beside each drawing.
 - f) What is the ratio in lowest terms?
2. A recipe calls for 250 mL of sugar, 500mL of oatmeal and 750 mL of flour.
- a) Write the amounts as a ratio.
 - b) Rename the ratio in lowest terms using blocks and draw to record your answer.
3. Use the colored cubes to show a ratio of 4:8:6 three different ways. Draw to record and write each as a ratio.
4. Choose a ratio. Show the ratio three different ways using the blocks. Draw to record and write each as a ratio.
5. In your own words define the term equivalent ratio.

When you have completed this station,
place your answer sheet in your portfolio.

Do not forget to label your entry.

Please tidy up the station.

2. Ratio & Proportion

Grade 7

R-1, R-4, R-6

Materials: Gulliver's Travels book or movie (optional)
measuring tape

Have you read, or heard of, the book by Jonathan Swift called *Gulliver's Travels*? Gulliver, a ship captain, suffers a shipwreck, and finds himself in the Land of Lulliput. Here, he finds that the heights of the people, plants and animals are in a 1:12 ratio to the heights of the people, plants and animals in his world.

1. Use the measuring tape to measure yourself.
Then complete this chart. You choose the last three!

Body Part	Actual Length	Length in Lulliput
length of middle finger		
length of your foot		

2. Each day the Emperor of Lulliput gave Gulliver the food and drink necessary for 1728 Lilliputians.
 - a) How did the Emperor's mathematicians arrive at that number?
 - b) Explain why this should be about the right amount.

When you have completed this station,
place your answer sheet in your portfolio.
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Please tidy up the station.

3. Ratio & Proportion

Grade 7

R-6, R-9

Materials: Saskatchewan Map
ruler
calculator

- 1. Choose 5 any places on the map and record.**
- 2. Pretend that you are a sales representative and you need to visit each one of these places. Make a schedule of the order in which you will visit each place. Try as much as possible to save on distance.**
- 3. Calculate the distance by highway by reading the map.**
- 4. Calculate the distance as the crow flies by measuring and using the scale factor.**
- 5. Suppose you need to spend about 2 hours in each place. Taking into account eating and sleeping time and the fact that you average 100km/h on the road, how many days will you need to make the rounds. Write your schedule starting at 9:00 Monday morning.**

When you have completed this station,
place your answer sheet in your portfolio.
Do not forget to label your entry.

Please tidy up the station.

4. Ratio & Proportion

Grade 7

**R-17, R-18, R-19
R-20, R-21**

Materials: one six-sided die
20x20 grid paper

- 1. Roll a six-sided die 20 times and record the numbers by using a tally.**
- 2. Write the number of times you rolled each number as a fraction of the total number of rolls. Reduce to simplest term.**
- 3. Write each of the above as decimals.**
- 4. Calculate the percent of tosses that were a 1, 2, 3, 4, 5 or 6.**
- 5. Use a grid and six different colors to graph the results.**

When you have completed this station,
place your answer sheet in your portfolio.
Do not forget to label your entry.

Please tidy up the station.

5. Ratio & Proportion

Grade 7

R-24 b,c

N-1, N-20

Materials: Restaurant menu
calculator
cheque blank

1. You are taking your friend out for supper at this restaurant.

a) List everything that you and your friend will be eating.

YOU

YOUR FRIEND

b) Total the cost. Calculate the tip at 15%.

c) Calculate the GST.

d) What did the meal cost you?

e) Suppose you forgot your calculator and you want to mentally estimate the tip and the GST to make sure you have enough money. Explain how you would do this.

f) Write the cheque for the total amount not including the tip because your friend offers to pay the tip for you.

When you have completed this station,
staple your cheque to your answer sheet and place both in your portfolio.
Do not forget to label your entry.

Please tidy up the station.

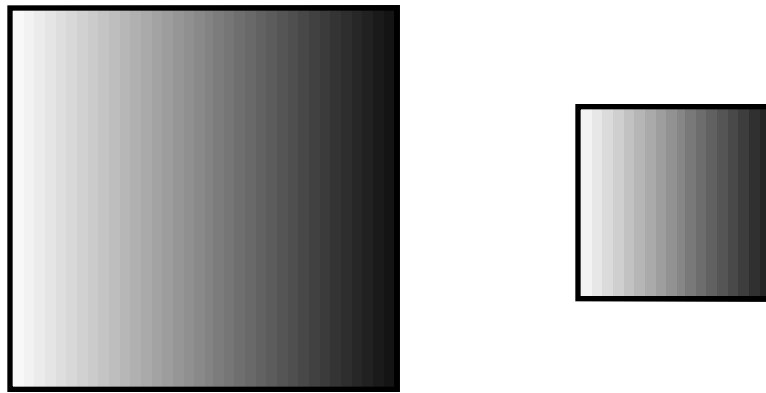
6. Ratio & Proportion

Grade 7

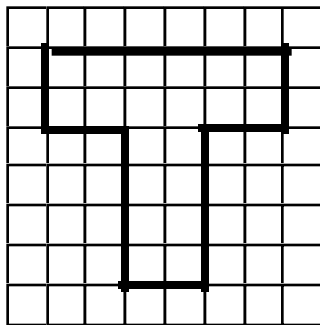
R-10

Materials: grid paper

1. One square is a reduction of the other. The scale is supposed to be 2:1. Measure to see if the reduction has been drawn correctly.



2.
 - a) Use the grid to draw a fairly large triangle.
 - b) Draw another rectangle similar to your first rectangle reducing is a a scale of 4:1.
3. Make the “T” using the squares on the grid.



- a) Draw another “T” by scaling down 2:1.
- b) Draw another “T” by scaling up 1:3.

When you have completed this station,
place your drawings and your answer sheet in your portfolio.
Do not forget to label your entry.

Please tidy up the station.

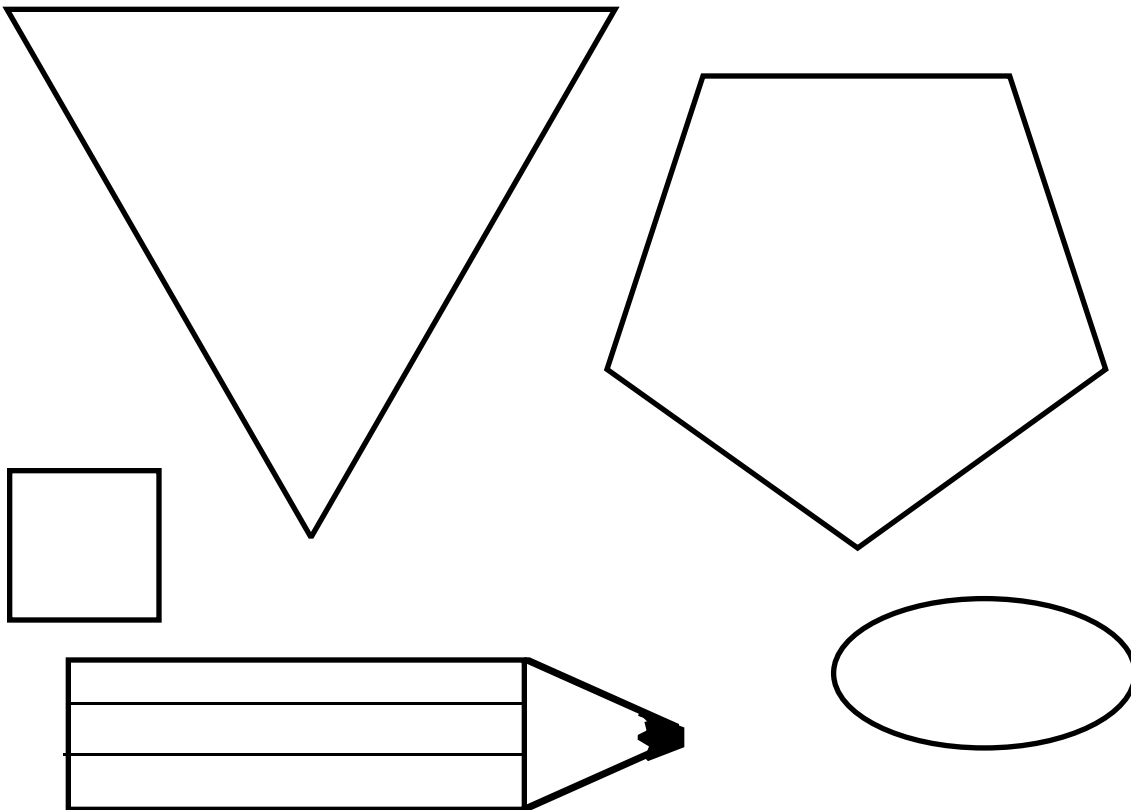
7. Ratio & Proportion

Grade 7

R-10

Materials: ruler

1. The following diagrams have been drawn at a scale of 1:4. What are the actual dimensions of each one?



2. Is this the correct scaling down of a real pencil? Explain your answer?
3. Give the dimensions of your pencil and draw it scaling down 2:1.

When you have completed this station,
place your drawings and your answer sheet in your portfolio.
Do not forget to label your entry.

Please tidy up the station.