

WORKPLACE MATH PREP



NAME:

EMAIL ADDRESS

Canada Food Guide Practice Workplace Math

We use mathematics when making decisions about food purchases. Using Canada's Food Guide can assist in making healthy choices in our meals and snacks.

1. From the chart identify your daily requirements for:

- A) Vegetables and Fruit
- B) Grain Products
- C) Milk and alternatives
- D) Meat alternatives
- E) Oils and fats

Recommended Number of Food Guide Servings per Day									
Age in Years Sex	Children			Teens		Adults			
	2-3	4-8	9-13	14-18	19-50	51+			
	Girls and Boys			Females	Males	Females	Males	Females	Males
Vegetables and Fruit	4	5	6	7	8	7-8	8-10	7	7
Grain Products	3	4	6	6	7	6-7	8	6	7
Milk and Alternatives	2	2	3-4	3-4	3-4	2	2	3	3
Meat and Alternatives	1	1	1-2	2	3	2	3	2	3

The chart above shows how many Food Guide Servings you need from each of the four food groups every day.

Having the amount and type of food recommended and following the tips in *Canada's Food Guide* will help:

- Meet your needs for vitamins, minerals and other nutrients.
- Reduce your risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis.
- Contribute to your overall health and vitality.

2. How would you consider your lifestyle? Active or less active or sedentary (inactive). Why do you think this and for your lifestyle would you consume a higher number or a lower number of calories?

3.

Examples of Servings:

Vegetables and Fruit

- 125 mL ($\frac{1}{2}$ cup) fresh, frozen or canned vegetable or fruit or 100% juice
- 250 mL (1 cup) leafy raw vegetables or salad
- 1 piece of fruit

Choose a day to record all your food and drink and then record your meals and snacks.

Grain Products

1 slice (35 g) bread or $\frac{1}{2}$ bagel (45 g)
 $\frac{1}{2}$ pita (35 g) or $\frac{1}{2}$ tortilla (35 g)
125 mL ($\frac{1}{2}$ cup) cooked rice, pasta, or couscous
30 g cold cereal or 175 mL ($\frac{3}{4}$ cup) hot cereal

Milk and Alternatives

250 mL (1 cup) milk or fortified soy beverage
175 g ($\frac{3}{4}$ cup) yogurt
50 g (1 $\frac{1}{2}$ oz.) cheese

Meat and Alternatives

75 g (2 ½ oz.)/125 mL (½ cup) cooked fish, shellfish, poultry or lean meat

175 mL (¾ cup) cooked beans

2 eggs

30 mL (2 Tbsp) peanut butter

Breakfast

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Lunch

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Supper

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Snacks

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1. Using the appropriate Food Guide Servings Tracker track your food intake.

Food Guide Servings Tracker		Male aged 19 - 50	
Food Guide Servings per day			
	8-10 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Vegetables and Fruit 1 Food Guide Serving = 125 mL (½ cup) fresh, frozen or canned vegetable or fruit or 100% juice or 250 mL (1 cup) leafy raw vegetables or salad or 1 piece of fruit	Eat at least one dark green and one orange vegetable each day. Choose vegetables and fruit prepared with little or no added fat, sugar or salt. Have vegetables and fruit more often than juice. Make at least half of your grain products whole grain each day. Choose grain products that are lower in fat, sugar or salt. Drink skim, 1% or 2% milk each day. Select lower fat alternatives. Have meat alternatives such as beans, lentils and tofu often. Eat at least two Food Guide Servings of fish each week. Select lean meat and alternatives prepared with little or no added fat or salt. Satisfy your thirst with water. Limit foods and beverages high in calories, fat, sugar or salt. Accumulate at least 2 ½ hours of moderate to vigorous physical activity each week
	8 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Grain Products 1 Food Guide Serving = 1 slice (35 g) of bread or ½ pita or tortilla (35 g) or 125 mL (½ cup) cooked rice, pasta or couscous or 30 g cold cereal or 175 mL (¾ cup) hot cereal	
	2 <input type="checkbox"/> <input type="checkbox"/>	Milk and Alternatives 1 Food Guide Serving = 250 mL (1 cup) milk or fortified soy beverage or 175 g (¾ cup) yogurt or 50 g (1 ½ oz) cheese	
	3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Meat and Alternatives 1 Food Guide Serving = 75 g (2 ½ oz) / 125 mL (½ cup) cooked fish, shellfish, poultry or lean meat or 175 mL (¾ cup) cooked legumes or tofu or 60 mL (¼ cup) shelled nuts and seeds.	
	30 to 45 mL (2 to 3 Tbsp) each day	Oils and Fats Include a small amount of unsaturated fat each day. This includes oil used for cooking, salad dressings, margarine and mayonnaise.	

For more information and to order copies of Canada's Food Guide visit Canada's Food Guide on line.

Food Guide Servings per day

7-8



☐ ☐
☐ ☐
☐ ☐
☐ ☐

Female aged 19 - 50

Vegetables and Fruit

1 Food Guide Serving =

125 mL (½ cup) fresh, frozen or canned vegetable or fruit or 100% juice

or

250 mL (1 cup) leafy raw vegetables or salad

or

1 piece of fruit

Grain Products

1 Food Guide Serving =

1 slice (35 g) of bread or ½ pita or tortilla (35 g) or

125 mL (½ cup) cooked rice, pasta or couscous or

30 g cold cereal or 175 mL (¾ cup) hot cereal

Milk and Alternatives

1 Food Guide Serving =

250 mL (1 cup) milk or fortified soy beverage or

175 g (¾ cup) yogurt or

50 g (1 ½ oz) cheese

Meat and Alternatives

1 Food Guide Serving =

75 g (2 ½ oz) / 125 mL (½ cup) cooked fish, shellfish, poultry or lean meat or

175 mL (¾ cup) cooked legumes or tofu or

60 mL (¼ cup) shelled nuts and seeds.

Oils and Fats

30 to 45 mL (2 to 3 Tbsp) each day



Include a small amount of unsaturated fat each day. This includes oil used for cooking, salad dressings, margarine and mayonnaise.

Eat at least one dark green and one orange vegetable each day.

Choose vegetables and fruit prepared with little or no added fat, sugar or salt.

Have vegetables and fruit more often than juice.

Make at least half of your grain products whole grain each day. Choose grain products that are lower in fat, sugar or salt.

Drink skim, 1% or 2% milk each day.

Select lower fat alternatives.

Have meat alternatives such as beans, lentils and tofu often.

Eat at least two Food Guide Servings of fish each week.

Select lean meat and alternatives prepared with little or no added fat or salt.

Satisfy your thirst with water.

Limit foods and beverages high in calories, fat, sugar or salt.

Accumulate at least 2 ½ hours of moderate to vigorous physical activity each week

For more information and to order copies of Canada's Food Guide visit [Canada's Food Guide on line.](#)

Record the number of servings you had from each food group.

a. Vegetables and Fruit

Grain Products

Milk and Alternatives

Meat and Alternatives

b. Based on your food choices for the day calculate, the percentage of your daily requirement for each food group.

Vegetables and Fruit

Grain Products

Milk and Alternatives

Meat and Alternatives

c. What recommendations would you make for healthier choices? Create a list of point-form suggestions. Explain why you would make these suggestions.

Jobs, Wages and Measuring Units

Workplace Math

1. Betsy recently graduated from St. Lawrence College Personal Support Worker Program. She is trying to decide what environment she would enjoy working in. Betsy's annual income will vary depending on where she decides to work.

Location	Wage (\$/hr)
Home/Residential Care	15
Independent/ Private long term care homes (Nursing homes)	19
Hospitals	23

- A) How much would Betsy earn in one week if she works with homes/residential care?
(Assume that she will work 40 hours per week.)

- B) How much would Betsy earn in one week if she works in an independent/private long term care home? (Assume that she will work 40 hours per week.)

C) How much would Betsy earn in one week if she works in the hospital? (Assume she will work 40 hours.)

D.) How much would Betsy make in one year (52 weeks) , in the home/residential , nursing home/private long term care homes and in a hospital?

E.) How much more would Betsy earn per year in the hospital instead of a nursing home?

2. On occasion, when working in a nursing home, PSWs will be responsible for making orders of essential supplies.

The following items are needed for the nursing home:

- 500 adult diapers
- 12 bottles of powder
- 6 antibiotic ointments
- 5 boxes of gloves
- 125 syringes

To make the order, the following chart needs to be completed.

Supplies	Cost per package \$	Number of units	Cost \$
Adult diapers 100 per box	65.62		
Powder 6 bottles per package	42.20		
Antibiotic ointment 2 per package	22.50		
Gloves 120 per box	34.79		
Syringes 75 per box	52.85		
		Total Cost:	

Data Management Practice

Workplace Math

DISTRIBUTION OF OCCUPATIONS OF 200 ADULT MALES IN THE BAIDYA CASTE, MADARIPUR VILLAGE, BENGAL, 1914	
OCCUPATION	NUMBER
farmers	02
government service, clerks	44
lawyers	06
newspapers and presses	05
no occupation	25
not recorded	08
students	68
teachers	11
trade and commerce	23
other	08

- The *largest* number of men in the Baidya caste of Madaripur is involved in which field?
☐ education
☐ agriculture
☐ government
☐ publishing
- The *smallest* number of men in the Baidya caste of Madaripur is involved in which field?
☐ education
☐ agriculture
☐ government
☐ publishing
- What is the percentage of men in the Baidya caste of Madaripur, for having no occupation and government service, clerks? Total group is of 200 adult males.

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4. What is the ratio of lawyers to government service, clerks in lowest terms? Use the information from the Occupations of adult males in the Baidya Caste, Madaripur village. Total group is of 200 adult males.

MEN'S AND WOMEN'S TABLE TENNIS, SUMMER OLYMPICS 2004				
COUNTRY	GOLD	SILVER	BRONZE	TOTAL
China	3	1	2	6
Korea	1	1	1	3
Denmark	0	0	1	1

WOMEN'S TABLE TENNIS, SUMMER OLYMPICS 2004				
COUNTRY	GOLD	SILVER	BRONZE	TOTAL
China	2	0	1	3
Korea	0	1	1	2
Hong Kong	0	0	0	0

MEN'S TABLE TENNIS, SUMMER OLYMPICS 2004				
COUNTRY	GOLD	SILVER	BRONZE	TOTAL
China	1	1	1	3
Demark	0	0	1	1
Hong Kong	0	1	0	1

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5. According to the Men's and Women's Table Tennis chart, which country received the most medals for both men and women in table tennis?

☐ China

☐ Korea

☐ Denmark

☐ Hong Kong

6. In the Men's Table Tennis competition, which country only won a bronze medal?

☐ China

☐ Hong Kong

☐ Denmark

☐ Korea

7. In which competition did Korea win an equal number of gold, silver, and bronze medals?

- ☐ the Men's competition
- ☐ the Women's competition
- ☐ no equal amounts
- ☐ the combined Men's and Women's competition

Below is a fictional table that could represent a publication from the CRA.

INCOME RANGE (x \$1,000)	INCOME TAX (%)	CPP
0–15	0	0
15–20	10	5
20–25	12	7
25–40	13	9
40–70	15	7
70–100	18	5
100+	20	3

1. How much tax will you pay if you earn \$28,000?

- ☐ 7%
- ☐ \$13
- ☐ \$13,000
- ☐ 13%

2. How much CPP will you pay if you earn \$75,000?

- ☐ 5%
- ☐ \$12,000
- ☐ 18%
- ☐ none

3. What is the highest salary you can earn and still pay no taxes?

☐ \$21,999

☐ \$20,000

☐ \$18,000

☐ \$15,000

4. What salary range pays 15 percent total, including tax and CPP?

☐ \$25,000 – \$40,000

☐ \$20,000 – \$25,000

☐ \$15,000 – \$20,000

☐ 0 – \$15,000

5. Complete the following table, using the information from above.

Income \$	Income tax %	Income tax Total \$ amount	CPP %	CPP Total \$ amount
15, 600				
22, 440				
35, 200				
77, 660				

b. John has an annual income of \$35, 200. What is the total dollar amount he will be paying in income tax and CPP?

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c. What is the difference in the total dollar amount being paid by a person who makes an annual income of \$35, 200 and a person who makes an annual income of \$77, 660 for income tax?

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Calculations Involving Perimeter and Area

Results:

- Successful independent completion of most questions (no additional rehearsal required)
- Successful completion of questions with some support (complete additional problem solving work involving area and perimeter calculations)
- Significant challenges encountered with either successful selection of or application of the appropriate formula and/or operation (additional rehearsal of area and/or perimeter and/or addition, subtraction, multiplication and division operations)

Assignment

(please show your work and/or record your answers in sentence form where appropriate)

During the construction of their new home, Scott and Eva try to decide which flooring choice is the best option for the home's two washrooms. Their total budget for bathroom flooring materials can be no more than \$500.

Tile is their first choice, but for any tile they select they will also run into the additional cost of laying down a tiling membrane first. The costs per square foot are as follows:

- Ceramic tile = \$1.75 /sq ft
- Stone tile = \$4.00 /sq ft
- Linoleum = \$1.50 /sq ft

+ additional cost for ceramic or stone tile:

- Tiling membrane = \$2.00 /sq ft

What is the total cost, then, for:

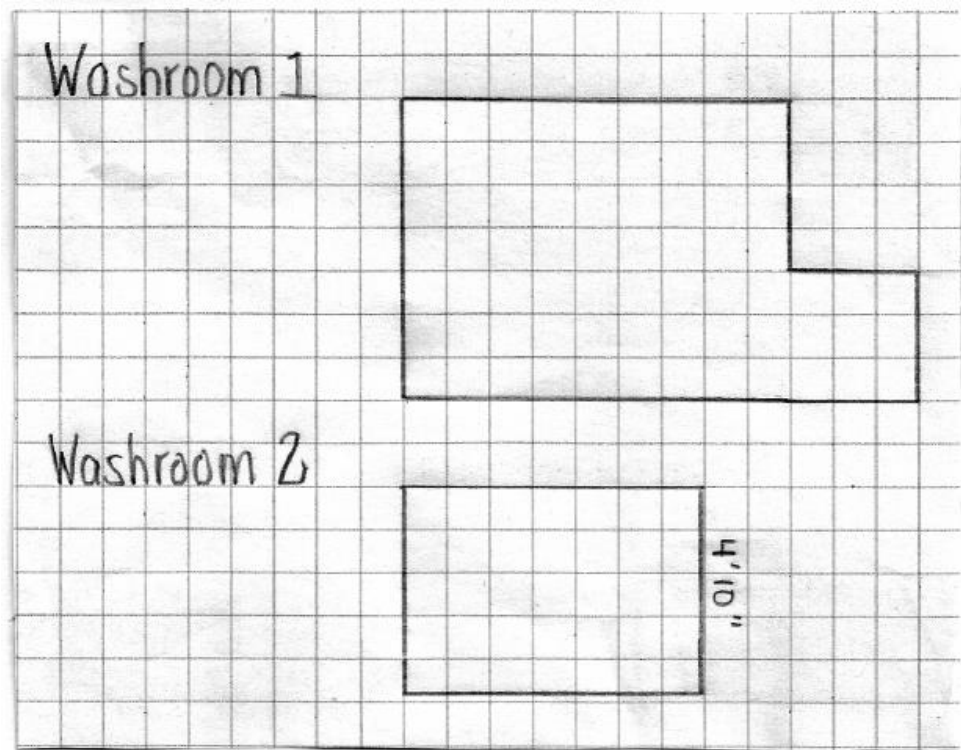
- Ceramic tile with tiling membrane = /sq ft
- Stone tile with tiling membrane = /sq ft

Below are the layouts for Scott and Eva's two bathrooms. If every square on the grid paper represents 1 square foot, calculate the total square footage for each bathroom. (Only the measurement for the partial foot dimension has already been provided.)

Washroom 1

Washroom 2

(calculate to the nearest square foot)



What is the combined amount of flooring required for both bathrooms?

Now that you have the total square footage calculated for both washrooms, record the total cost of each flooring option:

I. Ceramic tile

II. Stone tile

III. Linoleum

Which flooring option(s) are within Scott and Eva's budget?

Which flooring option(s) are not within budget?

Can Scott and Eva put stone tiles in one washroom and another flooring type in the other? If so, explain an option that would work and why you recommend it.

When Eva is placing her flooring order the salesperson suggest ordering 10% more flooring than the rooms require so that waste and breakage can be factored in.

What is the total amount of flooring material that Scott and Eva should order if they follow the salesperson's advice? (Calculate your answer to the nearest square foot.)

After the flooring has been installed, baseboards will have to be installed along the perimeter of each bathroom. What is the length of baseboard material required for each washroom?

Washroom 1

Washroom 2

If the baseboard material that Scott and Eva select is \$1.89 per foot, what is the total cost (before taxes) of the baseboards for both bathrooms?

This cost will have HST (13%) added to it. What is the new total for the cost of the baseboards? (Record your answer to the nearest hundredth.)

Congratulations, you're done!