# Grade 8 Math Exam Review
## Mixed Problems

Complete the following questions in preparation for your exam.

1. A dress costs $98.69. There is a 15% off sale, plus, if you put it on the store credit card, you get another 10% off. What is the new cost of the dress, including taxes?

2. Using the following data set, find the mean, median and mode.

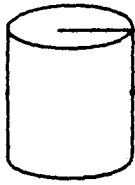   7, 6, 4, 12, 18, 14, 3, 9, 11, 7, 8, 15

3. a) A number is multiplied by three and decreased by seven. Write a number sentence for this problem.

   b) If the expression above is equal to eleven, find the number. Show all work!

4. Sherri has two chocolate bars. She eats ¼ of one of the chocolate bars and decides that she does not want any more. Therefore, she shares the rest of her chocolate with 3 of her friends. How much does each friend get?

5. a) If the volume of this cylinder is anywhere between 1200 mL and 1700 mL, find its radius and height.

b) What is the surface area of the cylinder above.

6. Add, subtract, multiply or divide the following fractions.

a) $\dfrac{2}{3} + \dfrac{1}{5}$

b) $\dfrac{7}{8} - \dfrac{1}{3}$

c) $1\dfrac{2}{5} \times \dfrac{10}{49}$

d) $2\dfrac{2}{3} + \dfrac{32}{36}$

e) $\dfrac{1}{4} + 3\dfrac{3}{5}$

f) $2\dfrac{4}{7} - 1\dfrac{1}{6}$

7. The following pizza menu has just been added at Mario's Diner.

| Veggies | Meat | Toppings |
|---|---|---|
| Mushrooms | Ham | Pineapple |
| Onions | Beef | Tomatoes |
| Green Peppers | Pepperoni | |

a) How many different pizza combinations are possible?

b) If someone designed a pizza for you at random with one of each topping, what is the probability that you would get ham on your pizza?

c) Assuming that you cannot repeat toppings, how many different pizzas could you make with mushrooms, green peppers, beef and pineapple?

8. A map of Canada has a scale of 1:2 000.000

a) In your own words, what does this mean?

b) On the map, it is 3.5 cm from Winnipeg to Halifax. How far would it be in real life?

9. Solve the following algebraic expressions. Remember BEDMAS!

a) $5 + 2(6 + 7)$

b) $400 \div 20 + 13 - 16 \times 2$

c) $9 + 7 \times 2^2 \div 14 - 11$

d) $-7 + 3(2 + 3 \times 4)$

10. A Textile company must cut circles from a square piece of cloth. Does 1 circle size waste less cloth than the other? Justify your answer by showing your calculations.



16 CM

16 CM