



**Fourth Annual  
Calgary Elementary School  
Mathematics Contest**  
April 29, 2015

**LEVEL-2 CONTEST**

**Instructions:**

- Transcribe your Contest ID number into the Contest ID box on the separate answer sheet.
- You have 50 minutes to answer the 20 questions.
- Record your answer for each question on the separate answer sheet.
- There is no penalty for incorrect answers, so answer every question.
- Good luck!

**Sponsors:**



Pacific Institute *for the*  
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**PART A:** Record the correct answer on the separate answer sheet. Each correct answer is worth **5 points**.

1. The temperature in Vancouver is  $12^{\circ}\text{C}$ . In Calgary it is  $10^{\circ}\text{C}$  colder than in Vancouver. In Edmonton it is  $8^{\circ}\text{C}$  colder than in Calgary. What is the temperature in Edmonton?  
(a)  $-8^{\circ}\text{C}$    (b)  $-6^{\circ}\text{C}$    (c)  $6^{\circ}\text{C}$    (d)  $8^{\circ}\text{C}$
2. In an equilateral triangle, one side has length 7cm. What is the perimeter of the equilateral triangle?  
(a) 7cm   (b) 21cm   (c) 28cm   (d) 49cm

3. Ahmed scored 17 out of 20 on his math quiz. What percent did he score?  
(a) 65%   (b) 75%   (c) 85%   (d) 95%
4. On a map of Alberta, a length of 1 centimeter measured on the map represents a real distance of 50 kilometers. What length on the map represents a real distance of 400 kilometers?  
(a) 8cm   (b) 10cm   (c) 12cm   (d) 5cm
5. Apples cost 75 cents each. If I spent \$5.25 on apples, how many apples did I buy?  
(a) 7   (b) 8   (c) 9   (d) 10
6. What is the smallest number of squares, each with a perimeter of 4, needed to completely cover a larger square with a perimeter of 8?  
(a) 2   (b) 4   (c) 8   (d) 16
7. What is the next number in the following sequence 6, 12, 8, 16, 12, 24, 20, ?  
(a) 28   (b) 32   (c) 36   (d) 40
8. Which of the following is not a prime number?  
(a) 37   (b) 47   (c) 57   (d) 67
9. A rectangle is twice as wide as it is tall. The perimeter of the rectangle is 24cm. What is the area of the rectangle?  
(a)  $18\text{cm}^2$    (b)  $24\text{cm}^2$    (c)  $32\text{cm}^2$    (d)  $36\text{cm}^2$
10. Annika has  $\frac{1}{4}$  of a dollar in one pocket, and  $\frac{7}{10}$  of a dollar in her other pocket. How much money does she have in total?  
(a) \$0.75   (b) \$1.05   (c) \$0.55   (d) \$0.95

**PART B:** Record the correct answer on the separate answer sheet. Each correct answer is worth **6 points**.

11. Jack's parents had a plan to repaint their house in 3 weeks. In the 1st week, they completed  $\frac{1}{4}$  of the total work. In the second week they completed  $\frac{2}{3}$  of the unfinished work. How much of the total work is left to be done in the 3rd week?

- (a)  $\frac{1}{5}$       (b)  $\frac{1}{4}$       (c)  $\frac{1}{3}$       (d)  $\frac{1}{2}$

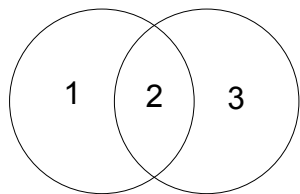
12. Lucas has some chickens and rabbits, there are 4 heads and 14 legs in all. How many rabbits does lucas have?

- (a) 1      (b) 2      (c) 3      (d) 4

13. A cat runs 2 times as fast as a mouse. The mouse runs at 3 meters per second and is 12 meters from the cat. How many seconds will it take for the cat to catch the mouse?

- (a) 2 sec.    (b) 3 sec.    (c) 4 sec.    (d) 6 sec.

14. With two circles we can create at most three regions. At most how many regions can be obtained by using two squares?



- (a) 2      (b) 3      (c) 5      (d) 9

15. How many 3-digit whole numbers are exactly 19 more than a 2-digit whole number?

- (a) 10      (b) 18      (c) 19      (d) 20

**PART C:** Record the correct answer on the separate answer sheet. Each correct answer is worth **8 points**.

16. A bag contains 4 green mints and 5 red mints. If Seung takes a mint without looking and then Kuldeep takes one of the remaining mints without looking, what is the probability that they will both choose green mints?

- (a)  $\frac{1}{6}$       (b)  $\frac{1}{9}$       (c)  $\frac{4}{27}$       (d)  $\frac{16}{81}$

17. A *palindrome* is a positive whole number that is the same when read forwards or backwards. For example, 252 and 6776 are both palindromes. How many different palindromes are there that are greater than 100 and less than 1000?

- (a) 20      (b) 50      (c) 90      (d) 100

18. A restaurant bought some rice on Monday. Each day the restaurant used 15 kg of rice. After 4 days, there was  $\frac{1}{4}$  of the rice left. How many kg of rice did the restaurant buy on Monday?

- (a) 60kg    (b) 100kg    (c) 70kg    (d) 80kg

19. A triangle can be formed having sides of length 3, 4, and 6. It is impossible, however, to construct a triangle with side lengths 2, 3, and 6. Using sides of length 5, 7, 11, and 15 how many different triangles with **exactly two equal sides** can be formed?

- (a) 11      (b) 9      (c) 4      (d) 2

20. The entire contents of a jug of juice can exactly fill 9 small cups and 4 large cups. The entire contents of the jug could instead be used to exactly fill 6 small cups and 6 large cups. If the entire contents of the jug is used to fill only large cups, what is the maximum number of large cups that can be filled?

- (a) 6      (b) 8      (c) 10      (d) 12