Sixth Annual
Calgary Elementary School
Mathematics Contest
April 26, 2017

LEVEL-2 CONTEST

Instructions:

• 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:

PART A: Record the correct answer on the separate answer sheet. Each correct answer is worth **5 points.**
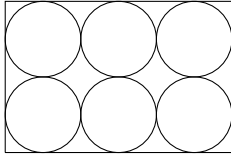
1. Which of the following is the greatest number?
   (a) $2 + 0 + 1 + 7$ (b) $2 \times 0 \times 1 \times 7$
   (c) $(2 + 0) \times (1 + 7)$ (d) $20 \times 1 + 7$

2. Three children ate 32 cookies altogether. Mike ate more cookies than any other child. What is the smallest possible number of cookies Mike ate?
   (a) 9   (b) 10   (c) 11   (d) 12

3. Tony's bedroom is 4 m long and 3 m wide. Carpeting the floor costs \$50 per m^2. How much will it cost to carpet the entire floor?
   (a) \$150   (b) \$200   (c) \$300   (d) \$600

4. The running time of a film is 2 hours and 20 minutes. The film begins at 6:55pm. If there is a short break of 10 minutes in the middle, at what time will the film end?
   (a) 8:15pm   (b) 9:15pm   (c) 9:25pm   (d) 9:30pm

5. Which of the following fractions has the smallest value?
   (a) $\frac{55}{66}$ (b) $\frac{22}{33}$ (c) $\frac{33}{22}$ (d) $\frac{22}{11}$

6. Every birthday, after blowing out the candles, Carla collects all the candles and puts them securely in a bag. At each birthday, the number of candles blown out equals her age. So far she has collected 66 candles. How old is Carla?
   (a) 6   (b) 11   (c) 33   (d) 66

7. Judy ate $\frac{3}{4}$ of a 240g chocolate bar and $\frac{2}{3}$ of a 210 g bar. How much chocolate did she eat?
   (a) 140 g   (b) 180 g   (c) 320 g   (d) 450g

8. Two 10 cm by 10 cm squares overlap to form a 10 cm by 15 cm rectangle. What is the area of the region where the two squares overlap?
   (a) 50 cm^2 (b) 100 cm^2 (c) 150 cm^2 (d) 200 cm^2

9. Ben has 100 dollars. Each of his four siblings has 40 dollars. How many dollars does Ben have to give to each of his four siblings so that all of the children have the same amount of money?
   (a) \$ 10   (b) \$ 12   (c) \$ 15   (d) \$ 20

10. A rectangle has an area of 450 cm^2. If its width is half of its length, find its length.
    (a) 15 cm   (b) 20 cm   (c) 25 cm   (d) 30 cm

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

11. A dragon has five heads. Every time a head is chopped off, five new heads grow. If six heads are chopped off, one by one, how many heads will the dragon finally have?
    (a) 25   (b) 28   (c) 29   (d) 30

12. The sum of three consecutive even integers is 102. What is the value of the largest consecutive even integer.
    (a) 32   (b) 34   (c) 35   (d) 36

13. On a 400m long log, a worm starts to crawl from one end. Each day it crawls half of the remaining distance. After 4 days, how far is it from the other end of the log?
    (a) 25 m   (b) 50 m   (c) 350 m   (d) 375 m

14. What is the perimeter of the figure obtained from a 20cm by 15cm rectangle, by cutting out four identical squares with a perimeter of 12cm each, one at each corner?
    (a) 46 cm   (b) 70 cm   (c) 94 cm   (d) 118 cm

15. Randy is asked to colour a large number of squares using different colours. He uses green for the first square, red for the second, blue for the third, pink for the fourth, purple for the fifth, and then repeats the same sequence over and over. What colour is the 2017th square?
    (a) Green   (b) Red   (c) Pink   (d) Purple

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

16. A half-filled water jug with water weighs 500 g, while the same jug weighs 400 g when only a quarter of it is filled with water. If the jug is filled completely, how much does it weigh?
    (a) 600 g   (b) 700 g   (c) 800 g   (d) 900 g

17. A 24-hour digital clock shows the time 12:39. How many additional times will we see the same four digits again within 24 hours (the digits do not need to be in the same order)?
    (a) 2 times   (b) 4 times   (c) 5 times   (d) 7 times

18. If each of the circles has a radius of 2cm, what is the area of the surrounding rectangle?

    (a) 10 cm^2 (b) 20 cm^2 (c) 24 cm^2 (d) 96 cm^2

19. Jessica has a picture frame with a total area of 288 in^2. The dimension of the picture without the frame is 12in by 14in. What is the larger dimension, in inches, of the frame?
    (a) 2 in   (b) 14 in   (c) 16 in   (d) 18 in

20. Bob is 2 years less than twice as old as Ellen. The sum of twice Bob's age and three times Ellen's age is 66. How old is Ellen?
    (a) 10   (b) 15   (c) 18   (d) 20