MOUNT ROYAL
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# Tenth Annual <br> Calgary Elementary School Mathematics Contest 

April 27, 2022

## LEVEL-1 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!


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

1. The second largest number in the set of numbers $\{0.3,0.9,0.18,0.27,0.081\}$ is
(a) 0.9
(b) 0.27
(c) 0.3
(d) 0.18
2. $(2+3+4+5+6)-(6+5+4+3+2)=$
(a) 0
(b) 5
(c) 1
(d) 4
3. If you buy a pack of a dozen pears it costs $\$ 4.30$. If you buy a singel pear it costs 40 cents. How much do you save if you buy a pack of a dozen pears?
(a) 40 cents
(b) 50 cents
(c) 60 cents
(d) 70 cents
4. What is one half of one sixth of 60 ?
(a) 3
(b) 5
(c) 6
(d) 7
5. On Tuesday morning there are 40 birds. They double in number every day. How many birds are there on Saturday morning?
(a) 120
(b) 240
(c) 320
(d) 640
6. How many hours are there in two weeks?
(a) 336
(b) 280
(c) 200
(d) 140
7. A Pythagorean triple is a set of three whole numbers where the sum of the squares of two of them is equal to the square of the third number. For example $3,4,5$ is a Pythagorean triple because $3^{2}+4^{2}=9+16=25=5^{2}$. Which of the following sets is a Pythagorean triple?
(a) $4,5,6$
(b) $5,12,13$
(c) $7,9,11$
(d) $4,7,8$
8. Which of the following is the greatest number?
(a) $3+1+0+2$
(b) $3 \times 1 \times 0 \times 2$
(c) $(3 \times 1)+(0 \times 2)$
(d) $(3+1) \times(0+2)$
9. I bought some candies on Friday. I ate half of them that day and I ate 11 more on Sunday. Afterwards I had 6 candies left. How many candies did I buy?
(a) 22
(b) 30
(c) 34
(d) 36
10. I finished in 6 th place in a race. I was also 6 th when counted from the last. If there were no ties, how many kids were in the race?
(a) 9
(b) 10
(c) 11
(d) 12

PART B: Record the correct answer on the separate answer sheet. Each correct answer is worth 6 points.
11. A car dealer sells cars of three different colours, with or without radios, and with or without heated seats. How many choices of a car can a buyer choose from?
(a) 5
(b) 7
(c) 8
(d) 12
12. A certain town (Town A) has 1000 people and its population increases by 60 people each year. Another town (Town B) has 2000 people and its population increases by 10 people each year. How long will it be until the two towns have the same number of people?
(a) 10 years
(b) 15 years
(c) 20 years
(d) 25 years
13. An empty jar weighs 100 grams. When it is half-full it weighs 500 grams. How much will it weigh when it is full?
(a) 800 grams
(b) 900 grams
(c) 1000 grams
(d) 1100 grams
14. $\left(0.1+\frac{1}{0.1}\right)^{2}$ is equal to
(a) 102.01
(b) 12.1
(c) 1.21
(d) 100.01
15. If the number pattern shown is continued, what is the second number in the fifteenth row?

(a) 16
(b) 15
(c) 14
(d) 5

PART C: Record the correct answer on the separate answer sheet. Each correct answer is worth 8 points.
16. Yassin walks at the constant rate of $2 \mathrm{~km} / \mathrm{hr}$. Julia walks at the constant rate of $4 \mathrm{~km} / \mathrm{hr}$. They start walking together at the same time and Julia arrives at their destination $1 / 2$ hour before Yassin. What distance did they walk?
(a) 1 km
(b) 1.5 km
(c) 2 km
(d) 2.5 km
17. What is the most frequent sum of two distinct factors of 20 ?
(a) 3
(b) 6
(c) 9
(d) 11
18. Five students wrote a mathematics contest. Their average mark was 68 . If the marks of four students were $75,62,84$, and 53 , what was the mark of the fifth student?
(a) 58
(b) 62
(c) 66
(d) 59
19. A rectangle is 3 times as tall as it is wide. If it has area $48 \mathrm{~cm}^{2}$ then its perimeter is
(a) 12 cm
(b) 16 cm
(c) 24 cm
(d) 32 cm
20. Which fraction is between $\frac{1}{6}$ and $\frac{1}{5}$ ?
(a) $\frac{2}{11}$
(b) $\frac{3}{8}$
(c) $\frac{2}{9}$
(d) $\frac{1}{4}$

