Print ID # _____ ____
100

School Name _____ Student Name _____
(Print First, Last)

2013 Edmonton Junior High Math Contest

Part A: Multiple Choice Part B (short answer) Part C(short answer)

1.
2.
3.
4.
5.

6.	15.
7.	16.
8.	17.
9.	18.
10.	19.
11.	
12.	
13.	
14.	

Part A: _____× 4 + _____ × 2 = _____ Blank answers ≤ 3.
Correct blank
Part B: _____× 5 = _____ MARKER
Correct ONLY
Part C: _____× 7 = _____
Correct
Total: = _____

Instructions:
1. Calculator, grid paper and scrap paper are permitted. You may write on the booklet.
2. Programmable calculators and cell phones are not allowed.
3. Each correct answer in Part A is worth 4 points, each correct answer in Part B is worth 5 points, and each correct answer in Part C is worth 7 points. In Part A each blank is worth 2 points each up to a maximum of 3 blanks.

4. Each incorrect answer is worth 0 points.
5. Unanswered questions in Parts B and C are worth 0 points.
6. You have 60 minutes of writing time.
7. When done, carefully REMOVE and HAND IN only page 1.

Edmonton Junior High Math Contest 2013

Place your answers on the answer sheet provided.

Part A: Multiple Choice: Each correct answer is worth 4 points. Each unanswered question is worth 2 points to a maximum of 3 unanswered questions.

1. If a stack of 5 dimes has a height of 6 mm, then what would be the value, in dollars, of a 1.5 m high stack of dimes?

A) $1.25
B) $12.50
C) $125.00
D) $125.50
E) $1250.00

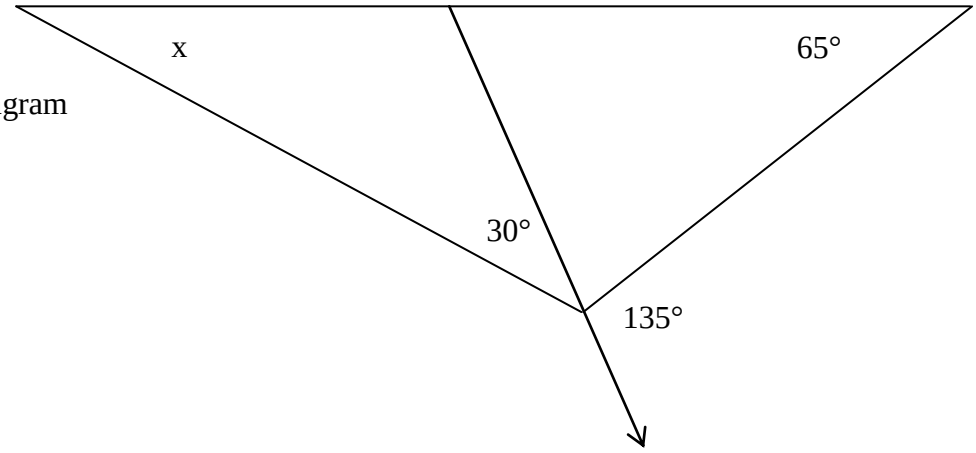
2. There are about 7.06 billion people in the world, and there are about 35 million people in Canada. What percent of the world population is in Canada?

A) 0.005 %
B) 0.05 %
C) 0.5%
D) 5.0 %
E) 5.5 %

3. A large soup pot is in the shape of a right circular cylinder, and it has no lid. When filled to the top, it can hold 9.42 L of soup. The height of the pot is 30 cm. Approximately how many square centimeters of metal are needed to make the pot? Round the answer to the nearest whole cm^2. (1 L = 1000 cm^3 , use 3.14 for all your calculation)

A) 2198
B) 2218
C) 2838
D) 3010
E) 3140

4. Without a protractor, determine the number of degrees for *x*. Note: the diagram is NOT drawn to scale.



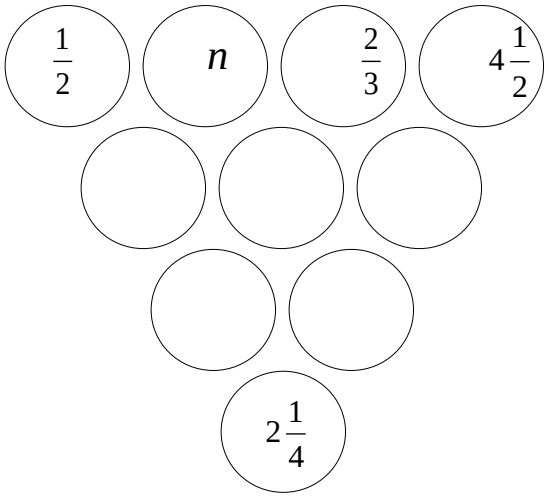
A) 30°
B) 40°
C) 45°
D) 60°
E) 65°

5. Robert wanted to buy Mandy a gold bracelet while it was on sale for $160 off the regular price. He planned to pay it off with 2 equal monthly payments of $340. Instead, it went on sale for only $75 off the regular price, and he paid for it with 5 equal monthly payments. How much was each of his monthly payments? (Assume that there is no interest nor GST.)

A) $89
B) $136
C) $151
D) $153
E) $168

Part B: Short Answer: Place the answer in the blank provided on the answer sheet. Each correct answer is worth 5 points.

6. The number in each circle is the product of the 2 numbers above it. What is the value of *n*?



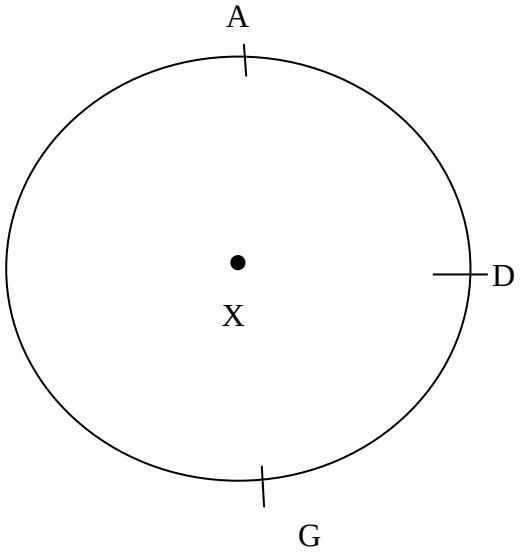
7. The sum of 8 consecutive odd integers is –32. By how much does the median exceed the minimum number?

8. What fraction of the numbers from 1 to 100, inclusive, is prime? Express your answer in lowest terms.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
51	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
61	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
71	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
81	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**
91	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**

9. The three dimensions in centimeters (length, width and height) of a right rectangular prism are all natural numbers. The volume of the prism is 770 cm^3. What is the least possible sum that the three numbers can have?

10. Twelve points are equally spaced on a circle with centre X. Points are labeled sequentially clockwise around the circle using the letters A to L. To the nearest degree, and without the use of a protractor, calculate the measure of angle AFX.

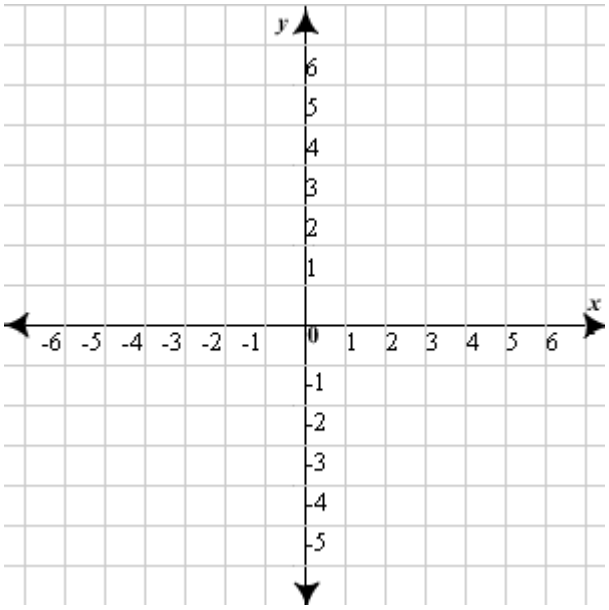


11. Kylee has a set of 5 cards numbered from 1 to 5. Kassidy has a set of 10 cards numbered from 1 to 10. If they each pick one card from their deck at random, what is the probability that the product of the 2 chosen numbers is odd? Write your answer as a percent.

12. A 3-digit number has the following properties. The hundreds digit is a composite number, the tens digit is a prime number, and the units digit is greater than 2 but less than or equal to 6. How many such 3-digit numbers are there in total?

13. Svitlana takes $1\frac{1}{2}$ h to cycle to her friend's house if she averages 340 m/min. How many minutes should it take her to make the same trip if she travels at an average speed of 54 km/h in her car? Express the answer rounded to the nearest whole number of minutes.

14. Points A(-5, 5), B(5,3) and C(-3,-3) are vertices of a triangle. The perimeter of ΔABC is between which two whole numbers?



Part C: Short Answer: Place the answer in the blank provided on the answer sheet. Each correct answer is worth 7 points.

15. The digits: A, B, C, D, E, F, G, H, and I, not necessarily all different digits, are arranged in a 3 by 3 configuration. The first two rows, ABC and DEF, are three-digit prime numbers. The third row GHI and the first column ADG are three-digit cubes. The last two columns BEH and CFI are three-digit squares. What is the value of digit E?

16. In triangle ABC, AB = 25 and CA = 24. E is a point on CA and F is a point on AB such that EF cuts ABC into two regions of equal areas. If CE = 4, what is the length of BF?

17. How many numbers between 100 and 1,000,000 have all digits the same and are divisible by 3?

18. What is the largest number whose digits are all different and the number is NOT divisible by 9?

19. There exits two prime numbers: p and q, such that $2p + 3q = 99$. The sum of p and q is also the product of 2 other prime numbers: m and n. Find m and n.