

GRADE:
NAME:
SURNAME:

HMC 2012- FIRST ROUND

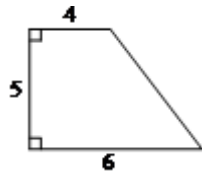
FOR MATHEMATICS TEACHER
LEARNER'S
MARK

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HORIZON MATHEMATICS COMPETITION

- $1421 \div 7 = ?$
a) 23 b) 203 c) 230 d) 123 e) 223
- The next number in the sequence 4, 5, 7, 10, 14.. is
a) 15 b) 17 c) 19 d) 20 e) none
- Which one of the following is equal to half of the 2^8 ?
a) 2^4 b) 2^7 c) 1^8 d) 16 e) 64
- $4 \times (5+3) - 13 = ?$
a) 19 b) 10 c) 29 d) 20 e) 9
- Which of the following rational number is the biggest?
a) $\frac{2}{3}$ b) $\frac{1}{2}$ c) $\frac{3}{4}$ d) $\frac{3}{5}$ e) $\frac{5}{8}$

- What is the sum of all positive integers which divide 18 evenly?
a) 21 b) 31 c) 37 d) 38 e) 39



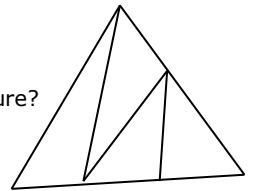
- Find the area of the figure.
a) 20 b) 22 c) 25 d) 30 e) 40
- Bruce Lee has eaten $\frac{1}{5}$ of a pie and Chuck has eaten $\frac{3}{4}$ of the rest. What portion of pie left for Jackie?
a) 20% b) 25% c) 40% d) 60% e) none

- If 100 grams of ice cream contain 12 grams of fat, how much fat is in 350 grams of ice cream?
a) 42 b) 60 c) 84 d) 21 e) 36

- 5 students write mathematics exam, if average score of first three students is 7 and average score of other two students is 9, then which one is the average score of five students?
a) 8.5 b) 7.8 c) 7.5 d) 8 e) 7.2

- Which one is divisible by 4?
a) 154 b) 250 c) 442 d) 384 e) 846
- 5 times a number, decreased by 7, is 28. What is the number?
a) 5 b) 7 c) 10 d) 6 e) 4
- Uncle Stanley earned R260 selling bottled water, R320 selling oranges and R280 selling energy bars. If all items cost the same, what is the greatest possible price per item?
a) 15 b) 20 c) 25 d) 40 e) 70
- Peter is cycling at 20 km per hour. At this rate how long does it take him to cycle 1km?
a) 0.5 min b) 1 min c) 2 min d) 3 min e) 6 min

- How many triangles are there in the figure?



- a) 6 b) 7 c) 8 d) 9 e) 10
- Which one does not belong in this group?
a) Rectangle b) Cube c) Rhombus d) Circle e) Hexagon
- Evaluate the expression $b^2 - 4ac$ if $a=-6$, $b=-4$ and $c=2$
a) 36 b) -48 c) 54 d) 64 e) -32
- In a class of 30 students, 23 students went swimming, 19 students went skating and 14 students did both. How many students did not do either of these activities?
a) 2 b) 3 c) 7 d) 11 e) 16

19. $1 - \frac{1}{2} - \frac{2}{3} - \frac{3}{4} - \frac{4}{5} - \frac{5}{6} - \dots - \frac{99}{100} = ?$

- a) 0 b) 0.9 c) 0.99 d) 0.999 e) none
- $11111 - 1111 + 111 - 11 + 1 = ?$
a) 12345 b) 10000 c) 10101 d) 10201 e) 12021