

# HMC 2011 ROUND – 1

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1. Which of the following is the smallest?

- a)0.0303    b)0.033    c)0.3003    d)0.33    e)0.3030

2.  $0.01 + 0.001 = ?$

- a)0.02    b)0.002    c)0.2    d)0.0011    e)0.011

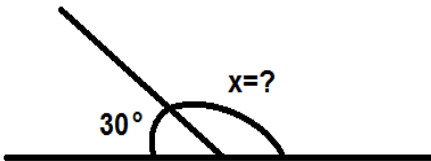
3. How many prime numbers are there in between 1 and 20?

- a)6    b)7    c)8    d)9    e)10

4. 3 million equals

- a)3x1000    b)3x100000    c)3x10000    d)3x1000000    e)3x10000000

5. Find the value of x.



- a)60    b)90    c)120    d)150    e)180

6. If  $a \blacksquare b = a^2 - 2ab$ , then find  $5 \blacksquare 6$ .

- a)35    b)-35    c)-50    d)50    e)-45

7.  $\frac{3}{8} + \frac{1}{3} = ?$

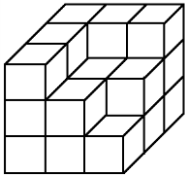
- a) $\frac{3}{8}$     b) $\frac{3}{24}$     c) $\frac{4}{24}$     d) $\frac{17}{24}$     e) $\frac{10}{24}$

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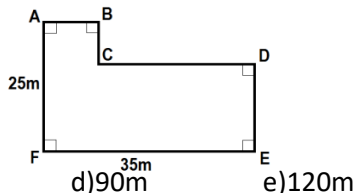
8. Josh has 22 less marbles than Adnaan. Together they have 84 marbles. How many marbles does Josh have?
- a)24      b)47      c)53      d)31      e)34
9. The sum of two numbers is 18. What is the greatest possible product of these two numbers?
- a)80      b)48      c)81      d)54      e)72
10. It takes Sihle 20 minutes to cycle to school. He wants to be at school on Saturday morning 15 minutes before a soccer match which begins at 08:30. When must he set out?
- a)08:10      b)07:55      c)08:05      d)7:50      e)8:15

11. How many unit cubes are there in the following shape?



- a)22      b)27      c)23      d)24      e)25
12. Peter, Paul and David worked in the garden. Peter worked for 3 hours, Paul worked 2 hours and David worked 1 hour. They are paid R54 for their work altogether. How much should Peter get?
- a)18      b)27      c)24      d)54      e)16

13. The perimeter of the figure ABCDEF is



- a)25m      b)35m      c)60m

- d)90m      e)120m

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14.  $5 + 9 \div 3 \times 2 = ?$

- a)4            b)12            c)11            d)5            e)10

15. The goal average of Liverpool is 2.5 in first 4 week. If the average increases to 2.8 at fifth week; what is the number of goals scored by Liverpool at fifth week?

- a)1            b)2            c)4            d)6            e)8

16. A concert was held in a school. Learner ticket costs R10 and adult ticket costs R16. The school sold 220 tickets for R2800. What's the number of learner ticket sold?

- a)70            b)90            c)100            d)110            e)120

17. The sum of three consecutive even integers is 102. Find the smallest number.

- a)32            b)33            c)34            d)35            e)36

18. 80% of the learners in a class pass a math exam. If eight learners failed the exam, find the number of learners in the class.

- a)32            b)10            c)20            d)16            e)40

19. What's  $5xy - 3z$  if  $x=2$ ,  $y=3$  and  $z=2$ ?

- a)28            b)22            c)20            d)26            e)24

20. Joshua constructs a rectangle by using four identical isosceles-right triangles. If the area of rectangle is  $128\text{cm}^2$ ; find the perimeter of rectangle.

- a)48cm            b)8cm            c)12cm            d)24cm            e)64cm