1)The length of the side of a square is represented by x+2. The length of the side of an equilateral triangle is 2x. If the square and the equilateral triangle have equal perimeter, then the value of x is

_____

2)It takes Mr. Karthik y hours to complete typing a manuscript. After 2 hours, he was called away. What fractional part of the assignment was left incomplete?

3)Which of the following is larger than 3/5?
 (1)½ (2) 39/50 (3) 7/25 (4) 3/10 (5) 59/100

4)The number that does not have a reciprocal is _____.

5)There are 3 persons Sudhir, Arvind, and Gauri. Sudhir lent cars to Arvind and Gauri as many as they had already. After some time Arvind gave as many cars to Sudhir and Gauri as many as they have. After sometime Gauri did the same thing. At the end of this transaction each one of them had 24. Find the cars each originally had.

6)6, 24, 60,120, 210
a) 336 b) 366 c) 330 d) 660 Answer : a) 336
Explanation : The series is 1.2.3, 2.3.4, 3.4.5, 4.5.6, 5.6.7, ... ('.' means product)

7)1, 5, 13, 25 Answer : 41
Explanation : The series is of the form 0^2+1^2, 1^2+2^2,...

 8)0, 5, 8, 17 Answer : 24
Explanation : 1^2-1, 2^2+1, 3^2-1, 4^2+1, 5^2-1

9)1, 8, 9, 64, 25 (Hint : Every successive terms are related) Answer : 216
Explanation : 1^2, 2^3, 3^2, 4^3, 5^2, 6^3

10)8,24,12,36,18,54 Answer : 27

11)71,76,69,74,67,72 Answer : 67

12)5,9,16,29,54 Answer : 103
Explanation : 5*2-1=9; 9*2-2=16; 16*2-3=29; 29*2-4=54; 54*2-5=103

13)1,2,4,10,16,40,64 (Successive terms are related) Answer : 200
Explanation : The series is powers of 2 (2^0,2^1,..).
14)All digits are less than 8. Every second number is in octal number system.
128 should follow 64. 128 base 10 = 200 base 8.

15)3,5,7,12,13,17,19

Answer : 12
Explanation : All but 12 are odd numbers

16)2,5,10,17,26,37,50,64

Answer : 64
Explanation : 2+3=5; 5+5=10; 10+7=17; 17+9=26; 26+11=37; 37+13=50; 50+15=65;

17) 105,85,60,30,0,-45,-90

Answer : 0
Explanation : 105-20=85; 85-25=60; 60-30=30; 30-35=-5; -5-40=-45; -45-45=-90;