A Few Tricky Questions and a Few Easy Questions?

1) If the mean of six numbers is 20 and when a seventh number is included the mean of the seven numbers is 21, what is the seventh number?

2) If two numbers add up to 36 and one number is two more than the other, what are the numbers?

3) 9 x ____ = 27 x 12. What's the missing number?

4) If 267 x 178 = 47526 what is 47.526 divided by 17.8?

5) What is the tens digit of the square root of 500?

6) Work out 67 x 47.

7) Divide 8192 by 16.

8) Work out 1/3 + 3/5.

9) Overnight Tess grows 10% taller. In the morning she measures 143cm. How tall was she on the previous day?

10) Which is larger, five sevenths or 71% ?

11) Continue the sequence 2, 5, 7, 12, 19, 31, 50, ___, ___, ___

12) Continue the sequence 4, 12, 36, 108, ___, ___

13) How many squares are there on a chess board?

(Don't just count the small squares.)

14) What is the smallest multiple of 19 that is greater than 400?

15) What is the sum of the prime numbers between 30 and 40?

Answers with explanations

1) The total of the 6 numbers is 6 x 20 =120. The total of the seven numbers is 7 x 21 = 147. The seventh number is 147-120=27.

2) Take off the extra 2. 36-2=34. Divide by 2. 34÷2=17. The numbers are 17 and 19.

3) 27 is 3 x 9. The missing number is 3 x 12 = 36

4) 47526 ÷ 178 = 267. 47.526 ÷ 17.8 = 2.67

5) 10^2 =100, 20^2 =400, 30^2 = 900. The tens digit of the square root of 500 is 2.

6) 67 x 47 = 3149

7) 8192÷16 = 512

8) 1/3 + 3/5 = 5/15 + 9/15 = 14/15

9)143cm is 110% of her previous height. Divide by 11 to see that 13cm is 10% of her previous height. Multiply by 10. She was 130cm yesterday.

10) Divide 5 by 7 to get 0.714285... > 71%

11) Each term is the sum of the previous two terms. The next three terms are 81, 131 and 212

12) Each term is 3 x the previous term. The next two terms are 324 and 972.

13) One 8 by 8 square. Four 7 by 7 squares. Nine 6 by 6 squares. Etc. The total is 1+4+9+16+25+36+49+64=204

14) 2 x 19 = 38. 20 x 19 = 380. 21 x 19 = 399. 22 x 19 = 418.

15) Prime numbers have just two factors.
31 has the factors 1 and 31. 31 is a prime number.

32 has the factors 1,2,4,8,16 and 32. 32 is not a prime number.

The prime numbers between 30 and 40 are 31 and 37. Their sum is 31+37 = 68.