Pierce Math League - Problem Solving – march 2020 Solns

Topic 2: Counting

[1] How many whole numbers are there from 34 to 117 inclusive (i.e. including 34 and 117)?   **84** [Transform to 1 -> 84]

[2] How many numbers are in the following series: 5.7, 11.7, 17.7, 23.7, …, 119.7, 125.7?   **21** [Add 0.3, Divide by 6, Transform 1 -> 21]

Topic 4: Miscellaneous Problems

[3] Lauren plays basketball with her friends and makes 10 baskets. If each basket is worth either 2 or 3 points, and Lauren scores a total of 26 points, how many baskets worth 3 points did she make?   **6**

[4] An equal number of nickels, dimes, and quarters has a total value of $9.20. What is the total value of the quarters? **$5.75** [$0.40 per packet, 23 packets, 23x$0.25 = $5.75]

[5] How many times does a digital clock display a time in which the sum of the digits equals 6 between 12am (midnight) and 12pm (noon)? **36**

12:03 12:12 12:21 12:30 1:05 1:14 1:23 1:32 1:41 1:50 2:04 2:13 2:22 2:31 2:40

3:03 3:12 3:21 3:30 4:02 4:11 4:20 5:01 5:10 6:00

10:05 10:14 10:23 10:32 10:41 10:50 11:04 11:13 11:22 11:31 11:40

[6] What is the sum of the consecutive whole numbers from 153 through 376 inclusive? **59248** [(112)(529)]

[7] On the planet Pentundecia, there is an unlimited supply of 5-cent and 11-cent coins, but there are no other coins whatsoever. What is the largest amount of money that a Pentundecian can NOT exactly make? (For example, a Pentundecian cannot make 4 cents.) **39 cents**