Maths for Computing 1

Solve the following:
Remember you can only add or subtract things of the same 'type' (*denominator*)

1   **1/6 + 1/3**

First, adjust fractions so that they all have the same common denominator. Remember, if you make an adjustment to the denominator you must do the same manipulation to the numerator for the fraction to have the same value. So 1/3 becomes 2/6. Then the sum can be expressed as:
= 1/6 + 2/6   = 3/6   = 1/2

2   **1/3 + 1/5 + 1/2**

Same approach. But this time we need a denominator that is a multiple of 3, 5, and 2 to get them all the same. 30 is the lowest number (multiplying them all together is bound to find a common multiple, though not always the lowest).
= 10/30 + 6/30 + 15/30 = (10 + 6 + 15)/30 = 31/30 = **1 $^1/_{30}$**

3   **1/2 × 1/3** *Multiply the numerators together and the denominators together, so*
=   (1 × 1)/(2 × 3) = **1/6**

4   **1/3 × 1/4 =**   (1 × 1) / (3 × 4) = **1/12**

5   **5.3 × 4**   =   (5 + 0.3) × 4 = 20 + 1.2 = **21.2**

6   **5.3 × 4.4**   =   (5 + 0.3) × (4 + 0.4) = 20 + 2 + 1.2 + 0·12 = **23.32**
        or =   5.3
               <u>4.4 X</u>
               21.2
               <u>2.12</u>
               <u>23.32</u>

7   **0.4 + 1/5**   =   4/10 + 2/10 = 6/10 = **3/5**   *or you could do:*
                           0.4 + 0.2 = **0.6**   *same value in decimal form.*

8   **250 ÷ 12**   **to 2 decimal places**
               =   250 ÷ 12
                         2 0 . 8 3 3 . . . . = **20.83 (to 2 dec. places)**
               =   12 ⟩2 5 0 . 0 0 0
                        <u>2 4</u>   2 × 12 = 24
                         1 0   *leaves one, bring down next number;*
                        <u>0 0</u>   *12 into 10 won't go*
                       1 0 · 0   *leaves 10, bring down next number;*
                         <u>9 · 6</u>   0.8 × 12 = 9.6
                           · 4 0
                          <u>· 3 6</u>
                            4 0
                            3 6

9      $((5 + 7) \div 4) \times (5 + 1) = (12/4) \times 6 = 3 \times 6 = 18$ *do inner brackets first*

10      $4x + 2 = 4$ *we want to isolate the x, so get everything else over to the right.*
             $4x = 4 - 2 = 2$ *subtract 2 from both sides.*
             $x = 2/4 = 1/2$

END