1. \[ \frac{2}{3} + \frac{7}{4} + \frac{9}{12} = 21 + \frac{2}{3} + \frac{3}{4} + \frac{7}{12} = 21 + \frac{8 + 9 + 7}{12} = 21 + \frac{24}{12} = 23. \]

2. The value of the stock after it lost its value last year was 0.60A and after it increased in value this year was 1.20 \( (0.60A) = 0.72A \), so the current value of the stock is 72\% of A.

3. Let \( x \) be the length of the sides of each square, then the perimeter of the region is \( 10x = 30 \) inches. Hence \( x = 3 \) inches and the area of the region is \( 4x^2 = 36 \) square inches.

4. Since \( \frac{1}{3} = 0.3 \), \( \frac{3}{10} = 0.3 \) and 31% = 0.31, when the numbers \( \frac{1}{3}, \frac{3}{10}, 31\% , 0.03, 0.303 \) are arranged from smallest to largest we have 0.03, 0.3, 0.303, 0.31, 0.3. Thus 0.303 is the middle number.

5. If \( b \) is the base, then \( (20_b)^2 = (2b)^2 = 4b^2 \) and \( 1000_b = b^3 \). Solving \( 4b^2 = b^3 \) we have \( b = 4 \).

6. The line that passes through the points \((-3, 8)\) and \((6, -1)\) has slope \( m = \frac{-1 - 8}{6 - (-3)} = \frac{-9}{9} = -1 \). Thus the equation of the line is \( y - 8 = -(x + 3) \Rightarrow y = -x + 5 \) and the y-coordinate of the point where the line crosses the y-axis is 5.

7. Since \( ON + ON + ON + ON = GO \) is a two digit number and \( O \) is nonzero, \( O \) is either 1 or 2. If \( O = 1 \) then \( 4N \) ends in 1 which is impossible. Thus \( O = 2 \) and \( G \) is either 8 or 9. But 82 is not divisible by 4 so \( G = 9 \) and the number \( ON \) is 23.

8. If we used 2 quarters we could use 0 or 1 dimes. If we use one quarter we could use 0, 1, 2 or 3 dimes, and if we used no quarters we could use 0, 1, 2, 3, 4, 5 or 6 dimes. Thus there are 13 different combinations of nickels, dimes and quarters that give a sum of 60 cents.

9. For the sequence 5, 5, 8, 16, 31, 55, . . . The sequence of differences is 0, 3, 8, 15, 24, . . . \( 1^2 - 1, 2^2 - 1, 3^2 - 1, 4^2 - 1, 5^2 - 1, \ldots \), the next number is 55 + 35 = 90.

10: Since \( OP = 6 \) we have \( \frac{OQ}{6 - OQ} = \frac{1}{2} \Rightarrow OQ = 2 \) and \( QP = 4 \). Hence the length \( AB \) is \( AQ + QB \)
\[ = \sqrt{2^2 - 1^2} + \sqrt{4^2 - 2^2} = \sqrt{3} + \sqrt{12} = 3\sqrt{3}. \]