1. Applying the order of operations, we first compute $2 \cdot 3 = 6$, and thus $1 + 2 \cdot 3 = 1 + 6 = \boxed{7}$.

2. Since every flower has 7 petals, and Alex has 1001 petals, there are $\frac{1001}{7} = \boxed{143}$ flowers.

3. Since 30 minutes is $\frac{1}{2}$ of an hour, 36 apples will take $36 \cdot \frac{1}{2} = \boxed{18}$ hours to clone.

4. Notice that $9 \cdot 18 = 162$ and $9 \cdot 19 = 171$. Any other multiple of 9 will be further away from 169, so our answer is the closer of the two - $\boxed{171}$.

5. Since $\frac{3+6+9}{2+4+6} = \frac{18}{12} = \frac{3}{2}$ and $\frac{2+4+6}{3+6+9} = \frac{12}{18} = \frac{2}{3}$, the answer is $\frac{3}{2} - \frac{2}{3} = \boxed{\dfrac{5}{6}}$.

6. There are 16 words in the sentence, and exactly 5 of them have four letters, as shown: "**What** is the probability **that** a randomly chosen **word** of **this** sentence has exactly **four** letters?"

   Therefore, the desired probability is simply $\boxed{\dfrac{5}{16}}$.

7. We have $0.123 + 0.231 + 0.312 = \boxed{0.666}$ by simply adding each place individually.

8. 5 years ago, I was 8 years old, at which point my brother must have been 4 years old. Thus, today he is $\boxed{9}$ years old.

9. After 5 days, the hedgehog has made $5 \cdot 5 = 25$ new friends, for a total of $4+25 = \boxed{29}$. Alternatively, in general the hedgehog will have $5(n-1)+4 = 5n - 1$ friends on day n by the same logic, so when $n = 6$ he will have 29 friends.

10. Every time Leo says a word, there will either be 1 bark or 2 barks. Hence there are least 15 barks. Every time Leo says "puppies" this number increases by 1, hence he said "puppies" $22 - 15 = \boxed{7}$ times.

11. The length is $2 \cdot 3 = 6$, and the width is 3. Thus the area is $6 \cdot 3 = \boxed{18}$.

12. Let the number in question be x. Then we know

$$21 + \frac{1}{4}x = \frac{3}{5}x \implies 21 = \left(\frac{3}{5} - \frac{1}{4}\right)x$$

$$\implies 21 = \left(\frac{12}{20} - \frac{5}{20}\right)x = \left(\frac{7}{20}\right)x$$

$$\implies x = 21 \cdot \frac{20}{7} = \boxed{60}.$$

13. Suppose there are g girls in the room. Then there are $2g$ teachers and $g+6$ boys in the room, for a total of $4g+6=38$ people. Thus $g=8$, and there are $8+(8+6)=\boxed{22}$ children.

14. Since five students take both languages, 27-5=22 students take French only and 32-5=27 students take Spanish only. Hence a total of $22+27=\boxed{49}$ students take exactly 1 language course.

15. We have $2\blacksquare 2 = 2\cdot 2 - \frac{2}{2} = 4-1=3$, and $3\blacksquare 3 = 3\cdot 3 - \frac{3}{3} = 9-1=\boxed{8}$.

16. Since the angles of a triangle add up to $180°$, the measure of the last angle is $180° - 33° - 67° = \boxed{80°}$.

17. The 7 smallest prime numbers are $2, 3, 5, 7, 11, 13$, and 17, the sum of which is $\boxed{58}$.

18. We have $0^2=0, 1^2=1, 2^2=4, 3^2=9, 4^2=16, 5^2=5, 6^2=36, 7^2=49, 8^2=64$, and $9^2=81$. Any other perfect squares will have the same last digit as one of these, so the possible last digits are 0, 1, 4, 5, 6, and 9. There are $\boxed{6}$ of these.

19. Since 2 darps is equal to 4 derps, 6 darps is equal to 12 derps. Similarly, since 3 derps is equal to 5 dirps, 12 derps is equal to 20 dirps. Hence, 6 darps is equivalent to $\boxed{20}$ dirps.

20. Suppose the side length of the cube is s. Then the area of each face of the cube, being a square, has area s^2. Since there are 6 such faces, the surface area of the cube is $6s^2$. As such we have $6s^2 = 294 \implies s^2 = 49 \implies s = \pm 7$. Clearly $s=-7$ does not make sense as a side length, leaving the solution $s=\boxed{7}$.

21. Let the integers be $x-2, x-1, x, x+1, x+2$. Then $5x = 210 \implies x = 42$, so the largest number is $x+2 = 42+2 = \boxed{44}$.

22. Since the length of Alex's rectangle and the width of Alex's rectangle are both 3 times the length and width of Kelvin's rectangle, the area of Alex's rectangle is $3\cdot 3 = 9$ times the area of Kelvin's rectangle. Hence the area of Alex's rectangle is $9\cdot 12 = \boxed{108}$.

23. If Alex writes x more problems, then he will have written a total of $61+x$ of the $187+x$ problems. Hence

$$\frac{61+x}{187+x} = \frac{1}{2}$$
$$\implies 122+2x = 187+x$$
$$\implies x = \boxed{65}$$

24. To swim 6 miles at 6 miles per hour takes one hour, and to swim 4 miles at 12 miles per hour takes $\frac{1}{3}$ of an hour. Thus the seal swam 10 miles in $\frac{4}{3}$ hours, so its average speed was $\boxed{7.5}$ miles per hour.

25. Suppose there are a big peaches and b little peaches. Hence there are $a+b$ peaches in the pile. Considering their weights, $8a+4b = 252 \implies 2a+b = 63$. Thus $a+b = 63-a$, so minimizing $a+b$ is the same as maximizing a. The largest possible value of a is 31, so there are $63 - 31 = \boxed{32}$ peaches in the pile.

26. The parrot learns $5 + 10 + 20 + 40 + 80 + 160 + 320 = \boxed{635}$ words. Alternatively, the parrot learns $5 \cdot 2^{n-1}$ words in hour n, hence it learned $5(2^0 + 2^1 + \ldots + 2^6) = 5(2^7 - 1) = \boxed{635}$ words.

27. Let George have G tattoos. Then Zeke has $G - 5$ tattoos and Jani has $G + 7$, so $G + (G - 5) + (G + 7) = 3G + 2 = 38 \implies G = \boxed{12}$.

28. The radius of the garden and the path together is $6 + 3 = 9$, hence the area is $9^2\pi = 81\pi$. The area of the garden is $6^2\pi = 36\pi$, so the area of the path is $81\pi - 36\pi = \boxed{45\pi}$.

29. Since one pineapple is equivalent to three apples and one peach is equivalent to four cherries, the last condition tells us that seven cherries and three apples is equivalent to four apples and four cherries. Hence three cherries weigh the same as one apple, meaning that $\boxed{9}$ cherries weigh the same as three apples, which weigh the same as one pineapple.

30. To mix the color purple, Rita would have to roll red once and blue once. She can either roll red first and blue next, which has a probability of $\frac{3}{6} \cdot \frac{1}{6} = \frac{1}{12}$, or roll blue first and red next, which also has a probability of $\frac{1}{6} \cdot \frac{3}{6} = \frac{1}{12}$. The final probability is thus $\frac{1}{12} + \frac{1}{12} = \boxed{\frac{1}{6}}$.

31. Let a and b be the integers, and without loss of generality assume that $a \geq b$ (if $a < b$, we can simply switch the two). Since $8 = a + b \leq 2a$, we know that a is at least 4. Furthermore, since $a^2 \leq a^2 + b^2 = 34$, we know that a is less than 6. Therefore we only need to check $a = 4$ and $a = 5$, the latter of which leads to the solution $a = 5, b = 3$. Therefore, $ab = 5 \cdot 3 = \boxed{15}$.

32. The total score of the class beforehand is $12 \cdot 65 = 780$, and the total score afterwards is $13 \cdot 66 = 858$. Hence the new student scored a $858 - 780 = \boxed{78}$ on the test.

33. Suppose there are x problems written thus far. Then

$$\frac{63+63}{63+x} = \frac{1}{2}$$

$$\implies \frac{2 \cdot 63}{63 + y} = \frac{1}{2}$$
$$\implies 4 \cdot 63 = 63 + y \implies y = 3 \cdot 63$$

and therefore Alex has written $\frac{63}{3 \cdot 63} = \boxed{\frac{1}{3}}$ of the current submissions.

34. To walk 42 feet away from his house at the rate of 3 feet per second, Young Guy needs 14 seconds. To run back at the rate of 7 feet per second, Young Guy needs only 6 seconds. Hence he covered 84 feet in 20 seconds, for a total average speed of $\boxed{4.2}$ feet per second.

35. 19 people in 2 days have the same production as 2 people in 19 days, so they will still pick $\boxed{2014}$ pears.

36. Suppose there are a alpacas and c chickens. Then $a+2c = 94$ and $2c+4a = 238$, so $3a = 238 - 94 = 144$. Hence $a = 48 \implies b = 23$, and thus there are $\boxed{71}$ animals on the farm.

37. To be a perfect square and a perfect cube, the number must be a perfect sixth power. The only sixth powers less than 2014 are $1^6 = 1, 2^6 = 64$, and $3^6 = 729$, the sum of which is $\boxed{794}$.

38. Since the triangle is isosceles, some two of its side lengths are equal. Hence either $x - 4 = 2x - 9 \implies x = 5$, $2x - 9 = 3x - 15 \implies x = 6$, or $x - 4 = 3x - 15 \implies x = \frac{11}{2}$. However, if $x = 5$, the side lengths of the triangle are 1, 1, and 0 - clearly not a triangle. Hence the only two valid values of x are 6 and $\frac{11}{2}$, the sum of which is $\boxed{\frac{23}{2}}$.

39. 5 sea otters can eat only half the amount that 10 sea otters can, but since they have $\frac{3}{2}$ the time the 10 sea otters had, they can eat $\frac{1}{2} \cdot \frac{3}{2} = \frac{3}{4}$ the amount. Hence they eat $36 \cdot \frac{3}{4} = \boxed{27}$ sea urchins.

40. Let the side length of the first cube be a and the side length of the second be b. Then $6a^2 = b^3$ and $a^3 = 32(6b^2)$, so multiplying these equations gives $6a^5 = 32(6b^5) \implies a^5 = 32b^5 \implies a = \boxed{2}b$.

41. 7 people is not enough to guarantee this, as they could each be born on a different day of the week. However, adding one more person to that mix ensures that some two people will be born on the same day of the week, so $\boxed{8}$ people is the least number necessary.

42. One table will seat 4 people, and every additional table will seat an additional two people. Hence we need another 19 tables after the first, for a total of $\boxed{20}$ tables.

43. Note that the surface area varies with the square of the side length, and the volume varies with the cube of the side length. In other words, multiplying the side length by x is the same as multiplying the surface area by x^2 and the volume by x^3. In this case, we are adding 20% to the side length, equivalent to multiplying by 1.2. Therefore, the surface area of the cube is increased by a factor of 1.44, or 44%, and the volume of the cube is increased by a factor of 1.728, or 72.8%. Thus $x = 44$ and $y = 72.8$, meaning $5(y - x) = 5(72.8 - 44) = \boxed{144}$.

44. The only way this is possible is if one die shows "1" and the other shows a prime number - 2, 3, or 5. Hence the probability is $\frac{1}{6} \cdot \frac{1}{2} + \frac{1}{2} \cdot \frac{1}{6} = \boxed{\dfrac{1}{6}}$.

45. Since the triangle's altitudes are all equal, the triangle must be equilateral. Suppose the side length of this triangle is $2s$. Then, by the Pythagorean theorem, $s^2 + 6^2 = (2s)^2 \implies 36 = 3s^2 \implies 12 = s^2$. The area of the triangle is thus $\dfrac{s^2\sqrt{3}}{4} = \frac{12\sqrt{3}}{4} = \boxed{3\sqrt{3}}$.

46. The biking leg of his trip is completed in $\frac{2}{10} = \frac{1}{5}$ of an hour, or 12 minutes, while the swimming leg of his trip is completed in $\frac{3}{12} = \frac{1}{4}$ of an hour, or 15 minutes. Since the entire trip takes $\frac{6}{6} = 1$ hour, he should spend $60 - 12 - 15 = \boxed{33}$ minutes on his walk.

47. If $x \leq 4$, then the median of the numbers is 4 and hence $\frac{24+x}{5} = 4 \implies x = -4$. If $4 < x < 7$, then the median of the numbers is x and hence $\frac{24+x}{5} = x \implies x = 6$. If $x \geq 7$, then the median of the numbers is 7 and hence $\frac{24+x}{5} = 7 \implies x = 11$. The sum of these three values is thus $(-4) + 6 + 11 = \boxed{13}$.

48. It takes Lev 20 minutes to reach 100, at which point Alex wakes up and begins running. Every minute, Alex runs 2 more integers than Lev does, so it will take 50 minutes for Alex to catch up. Thus, the total time before Alex catches up to Lev is $20 + 50 = \boxed{70}$ minutes.

49. The only way that this is possible is if the children alternate in the form "GBGBGBG", where "G" denotes a girl and "B" denotes a boy. Since there are $\binom{7}{3} = 35$ arrangement of 4 G's and 3 B's, only one of which is valid, the probability is $\boxed{\dfrac{1}{35}}$.

50. Let the number be $\overline{abc}$. If any of a, b, c are zero, then the product of the digits would be zero, implying that the sum of the digits is 0 - impossible. Hence a, b, c are all positive digits. WLOG assume that $a \leq b \leq c$ - we'll account for the permutations later. Thus we have $abc = a + b + c \leq 3c \implies ab \leq 3$, meaning we need check only $(a, b) = (1, 1)$, $(a, b) = (1, 2)$, and $(a, b) = (1, 3)$. The former case gives us $c = 2 + c$, contradiction,

the second gives us $2c = 3 + c \implies c = 3$, and the third gives us $3c = 4 + c \implies c = 2$, a contradiction as we assumed $b \leq c$. Therefore the only possible numbers are the permutations of $\overline{123}$, of which there are $3! = \boxed{6}$.