

1. We can only use digits 0, 1, 2, and 3 once to create three-digit numbers. How many numbers can we select for the first digit? We can't select 0 because if a number starts with 0 then it would only be a two-digit number. So there are **3** ways to choose the first digit. How many ways can we select a second digit? We've already used up one number for the first digit, so there are only **3** ways to choose the second digit. How many ways can we select a third digit? We've already used up two numbers for the first two digits, so there are only **2** ways to choose the third digit. So we do $3 \times 3 \times 2 = \boxed{18}$
2. $\boxed{12}$
3. $\boxed{6}$
4. $\boxed{24}$
5. $12 \times 11 = \boxed{132}$
6. Only 6 can be the units digit since it needs to be an even number. So there are 3 possibilities for the first digit, two possibilities for the second digit, and only one possibility for the third digit. So there are $3 \times 2 = \boxed{6}$ numbers.
7. Since D is repeated, we have to make sure we don't over count. There are only three three-letter words: ADD, DAD, and DDA. $\boxed{3}$
8. How many amounts can he make with only one bill? Three: \$10, \$5, and \$1. How many amounts can he make with two bills? Three: $\$10 + \$5 = \$15$, $\$5 + \$1 = \$6$, and $\$10 + \$1 = \$11$. How many amounts can he make with three bills? One: $\$10 + \$5 + \$1 = \16 . So he can make a total of $\boxed{7}$ different dollar amounts.
9. $\boxed{27}$
10. $\boxed{12}$