

1. This problem was incorrect, so it was omitted. This homework sheet is out of 9.
2.
3.
4. WHOLE NUMBERS: 0, 1, 2, 3, 4, ... So the four smallest even WHOLE numbers are 0, 2, 4, and 6. So their product is
5. Multiply by 11 trick: say you want to multiply 23×11 . The answer is 3 digits. The first digit is the first digit of the multiplying number: 2. The last digit is the second digit of the multiplying number: 3. The middle number is the sum of the digits of the multiplying number: $2 + 3 = 5$. So the answer is 253. $44 \times 11 = 484$, $52 \times 11 = 572$, and so on.
So if we know that $AB \times 11 = A9B$, then from the multiply by 11 trick, we know that the sum $A + B = 9$. So let's consider the combinations of A and B that add up to 9: $0 + 9, 1 + 8, 2 + 7, 3 + 6, 4 + 5, 5 + 4, 6 + 3, 7 + 2, 8 + 1, 9 + 0$. But we know that $A > B$, so the first digit has to be greater than the second. So only $5 + 4, 6 + 3, 7 + 2, 8 + 1, 9 + 0$ work. So the possible values of AB are .
6.
7. Whole numbers: 0, 1, 2, 3, 4, 5, ...
Even whole numbers: 0, 2, 4, 6, 8, ...
Prime whole numbers: 2, 3, 5, 7, 11,
The ONLY even prime number is 2, because every other even number is divisible by 2. So the answer is .
8.
9.
10.