1 Section A

A1
Ontario has 330 provincial parks and 6 national parks. There are no parks that are both provincial and national parks. In total, how many provincial or national parks are there in Ontario?

Solution. Because no parks are both provincial or national (there is no overlap), we can just add the two numbers together to get the total number of parks:

$$330 + 6 = \boxed{336}$$

In fact, we do not need a calculator to do this sum quickly, because the last digit of 330 is 0.

Answer to A1: 336

A2
What is the largest 3-digit whole number?

Solution. If a whole number has 3 digits, then it can have ones, tens, and hundreds digits, but cannot have thousands digits. The maximum number of ones is 9; the maximum number of tens is 9; and the maximum number of hundreds is 9. So the largest possible such number is $\boxed{999}$.

Answer to A2: 999

A3
What number can be put in the box to make this equation true?
(Because the box is too small to easily read or write in, please write your answer on the underlined blank space.)

$$7 + \square = 9$$

Solution. The opposite of addition is subtraction. Since $9 - 7 = 2$, that means we can add 2 to 7 to make 9. So the answer is $\boxed{2}$.

Answer to A3: 2

A4
A pond started with 3 ducks in the pond. 6 additional ducks come to the pond and 2 ducks fly out of the pond. How many ducks are now remaining in the pond?

Solution. First, 6 additional ducks come, so we have

$$3 + 6 = 9$$

ducks now. But then 2 ducks leave, so we have

$$9 - 2 = \boxed{7}$$

ducks in the end.

Answer to A4: 7

A5
Jodie has 10 pieces of pumpkin pie, and eats one piece each day. If she eats the first piece of pie on Monday, on what day of the week will she eat the 10th piece of pie?

Solution. After Monday, Jodie will have 10 - 1 = 9 pieces of pumpkin pie left to eat. Since she eats one piece per day, we need to count the day of the week which is 9 days after a Monday.

We know that since there are 7 days in a week, Jodie will have 9 - 7 = 2 pieces left to eat after the Monday of the following week. Therefore, she will finish all 10 pieces 2 days later, and the day of the week that is 2 days after Monday is $\boxed{\text{Wednesday}}$.

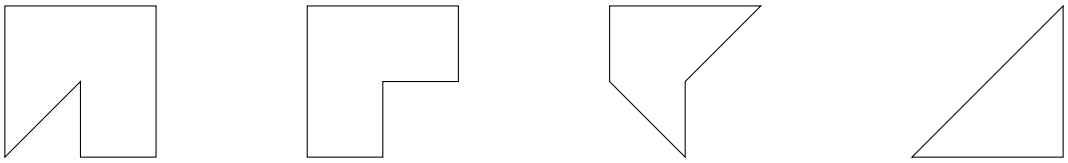
Answer to A5: Wednesday

A6
A basket has 5 apples, 7 pears, and 3 pencils. How many fruits are in the basket?

Solution. The only fruits in the basket are the apples and pears. Therefore, there are a total of $5 + 7 = \boxed{12}$ fruits.

Answer to A6: 12

A7
The shapes below are drawn to scale. Write the letter corresponding to the shape that has the largest area.



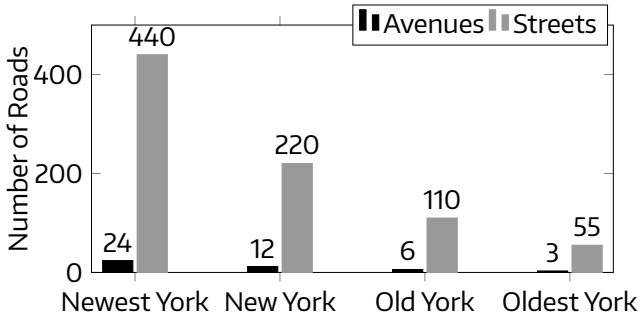
A B C D

Solution. We observe that each shape is a square with unique parts cut off. Shape A has a small triangle cut off, Shape B has a small square removed, Shape C has a small triangle and a trapezoid chopped off, and Shape D is missing a medium-sized triangle.

We can see that Shape A has the shape with the smallest area removed, so Shape $\boxed{\text{A}}$ has the largest area.

Answer to A7: A

A8
Four cities, Newest York, New York, Old York, and Oldest York, all have street grids that consist of roads named either "Street"s or "Avenue"s. In total, how many more roads are there in Newest York than in New York, Old York, and Oldest York combined? (Both streets and avenues are considered roads.)



Solution. Let us start off by counting the total number of roads in each city. Newest York has $440 + 24 = 464$ roads, New York has $220 + 12 = 232$ roads, Old York has $110 + 6 = 116$ roads, and Oldest York has $55 + 3 = 58$ roads.

To obtain the number of roads in New York, Old York, and Oldest York combined, we can add up their total number of roads, which is $232 + 116 + 58 = 406$ roads. Therefore, Newest York has $464 - 406 = \boxed{58}$ more roads than New York, Old York, and Oldest York combined.

Answer to A8: 58