

To calculate how many images Jessica can store on her 5MB USB flash memory drive, we need to follow these steps:

1. Determine the size of one thumbnail image in bytes:

- Each thumbnail image is 100 pixels wide and 100 pixels high.
- This gives us a total of $(100 \times 100 = 10,000)$ pixels per image.
- Each pixel is 16 bits in color.
- Since there are 8 bits in a byte, each pixel is $16/8 = 2$ bytes.
- Therefore, the size of one image in bytes is $10,000 \times 2 = 20,000$ bytes.

2. Convert the total available storage from MB to bytes:

- 1 MB = 1,024 KB and 1 KB = 1,024 bytes.
- Thus, 1 MB = $1,024 \times 1,024 = 1,048,576$ bytes.
- Therefore, 5 MB = $5 \times 1,048,576 = 5,242,880$ bytes.

3. Calculate the number of images that can be stored:

- Divide the total storage available by the size of one image:

Number of images = $(5,242,880 \text{ bytes}) / (20,000 \text{ bytes/image}) = 262.144$

- Since Jessica can't store a fraction of an image, she can store a whole number of images.

Thus, Jessica can store 262 images on her 5MB USB flash memory drive.

Number of image = 262