

How many dots are in one second of video? — Making videos

Five-Minute AI Lessons · Oct 2, 2026

One second of video is thirty pictures, and those thirty have to connect.

In a nutshell

- 1 A video isn't really a "moving picture." It's **lots of still pictures shown one after another, fast** — usually about twenty-four to thirty of them every second.
- 2 So a video AI has dozens of times more work than the picture AI you met yesterday. And **it can't draw each picture on its own** — each one has to connect to the one before it, or it won't look natural to us.
- 3 In numbers, one second means **more than 60 million dots** made from scratch and lined up with each other. That's why making videos is so slow and heavy.

One picture vs one second of video

One picture

- About 2.07 million dots
- Draw it once and you're done
- Nothing before or after to match



One second of video

- Needs about 30 pictures
- About 62.2 million dots
- The pictures have to connect

The right side isn't heavy just because it's bigger. If the 30 pictures don't line up, people's eyes catch it right away.

Key idea: video isn't a picture problem — it's a "connecting" problem

How many digits? Guessing one second of video

about 30

Pictures per second

Pictures per second **about 30**



Dots per picture **about 2.07 million**



Dots per second **about 62.2 million**



Dots in 10 minutes **about 37.3 billion**



Phone videos usually have 30 pictures per second; movies have 24. Each of these pictures is cal...

about 2.07 million

Dots per picture

Pictures per second **about 30**



Dots per picture **about 2.07 million**



Dots per second **about 62.2 million**



Dots in 10 minutes **about 37.3 billion**



That's 1920 times 1080. Each dot is called a "pixel," and a screen is just these dots packed ti...

about 62.2 million

Dots per second

Pictures per second **about 30**



Dots per picture **about 2.07 million**



Dots per second **about 62.2 million**



Dots in 10 minutes **about 37.3 billion**



That's 2.07 million times 30. Just to make one second, the AI has to decide this many dots — an...

Move the slider to guess how many digits the number has. Then compare it with the real value, and you'll feel W...

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Just three questions

Q1

Why is making a video so much heavier than making a picture?

- ① It has more colors
- ② The screen is bigger
- ③ It needs sound added
- ④ It needs dozens of pictures that all match

Q2

About how many pictures go into one second of video?

- ① About 30
- ② 1
- ③ About 300
- ④ About 3,000

Q3

What do you call one picture in a video?

- ① Pixel
- ② Frame
- ③ Resolution
- ④ Subtitle

Know the why, too

Q1

④

One second alone needs about thirty pictures, and they have to connect. There's a lot to make, but "matching" them is the harder part.

Q2

①

Phone videos have 30 per second, movies about 24. That's why one second balloons to 62.2 million dots.

Q3

②

One picture is a frame, and one dot inside it is a pixel. 30 frames per second, 2.07 million pixels per frame.

**One second of video is thirty pictures,
and those thirty have to connect.**



Tomorrow: Voice — what do you have to split apart to copy a human voice?