



JETS Challenge 129 Computer Time

Computer time (based on a 32-bit binary word) is defined as the Unix Epoch. It started at 0 000 000 000 in Greenwich, England, at midnight on Jan 1, 1970 and runs until 2 147 483 647 (which is equal to $[2^{31} - 1]$ seconds) on January 18, 2038.

The Challenge: Find the date after 314 159 265 (PI to nine places without the decimal) seconds after the Unix Epoch began?

	0 000 000 000	Jan 1 1970
	314 159 265	Dec 16, 1979
2^{31}	2 147 483 647	Jan 18 2038

$$X \text{ days} = 314159265 \text{ sec} \times 1\text{min}/60\text{sec} \times 1\text{hr}/60\text{min} \times 1\text{day}/24\text{hr} = 3636.102 \text{ days}$$

$$X \text{ years} = 3636\text{days} \times 1 \text{ yr}/365 \text{ days} = 9.961 \text{ years}$$

$$X \text{ days} = 0.961\text{yr} \times 365\text{day}/1\text{year} = 350.765 \text{ days}$$

$$X \text{ hrs} = .765\text{days} \times 24\text{hr}/\text{day} = 18.36 \text{ hr}$$

$$X \text{ min} = 0.36\text{hr} \times 60 \text{ min}/\text{hr} = 21.6 \text{ mins}$$

$$X \text{ sec} = 0.6\text{min} \times 60\text{sec}/1\text{mn} = 36 \text{ sec}$$

ANSWER:

JETS

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JETS Challenge problems are generously provided by Dave Meredith, Associate Professor, Penn State University-Fayette