

## The JETS Challenge

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### Challenge 80 – The Wristwatch Challenge

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**Problem:**

The second hand of a wristwatch measures 0.25 inches from the center to its moving tip.

If it starts at 9:00 am on March 14, what is the date and time (to the nearest minute) after the tip has traveled 1 mile?

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**Solution:**

$$C = \pi \cdot d$$

$$= \pi \cdot 2 \cdot (0.25)$$

$$= .5\pi \text{ inches}$$

$$1 \text{ mile} = 5,280 \text{ feet}$$

$$= 63,360 \text{ inches}$$

$$\# \text{ revolutions} = \frac{63,360}{.5\pi} = 40,336.3 \text{ revolutions}$$

$$\text{or } 40,336.3 \text{ minutes}$$

$$= 672.27 \text{ hours}$$

$$= 28.011 \text{ days}$$

$$.011 \text{ days} = 16 \text{ minutes}$$

⇒ so 28 days and 16 minutes later

or April 11 at 9:16 am

