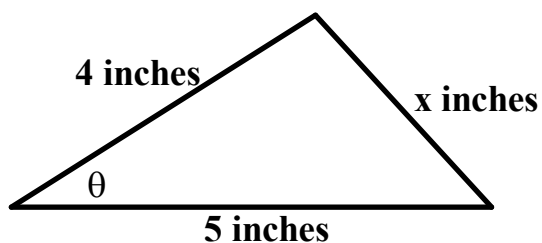


Advanced Challenge Level 2 Problem #20

Consider the triangle shown below.

Given: Angle θ is increasing at 2° per second.

Answer each of the following questions.



1. How fast is the area changing the instant that θ is 30° .
2. How fast is the area changing the instant that θ is 60° .
3. How fast is the area changing the instant that θ is 90° .
4. How fast is the area changing the instant that θ is 120° .
5. How fast is the area changing the instant that θ is 150° .
6. How fast is x changing the instant that θ is 30° .
7. How fast is x changing the instant that θ is 60° .
8. How fast is x changing the instant that θ is 90° .
9. How fast is x changing the instant that θ is 120° .
10. How fast is x changing the instant that θ is 150° .