

Mini Quiz
 Professor Marks
 ELC 5354

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- Do your work on this page and back.
- Write your name on the back of this page, not the front.
- Show all your work.
- Closed notes and closed books. A sheet of notes is allowed.

1. The pdf, $f_X(x)$, for an angle is uniform between 0 and 2π .

- (a) What is the $\Pr[2 \leq X \leq 3]$?
- (b) Sketch and label the conditional pdf $f_X(x|2 \leq X \leq 3)$.
- (c) Sketch and label the conditional cdf $F_X(x|2 \leq X \leq 3)$.

(a) $f_X(x) = \frac{1}{2\pi} ; 0 \leq x \leq 2\pi$
 $\Pr[2 \leq X \leq 3] = \int_2^3 \frac{1}{2\pi} dx = \frac{1}{2\pi} x \Big|_2^3 = \frac{1}{2\pi}$

