

5.7-1 Let  $T$  have a  $t$  distribution with  $r$  degrees of freedom. Find

- (a)  $P[ T \leq 2.228 ]$  when  $r = 10$ .
- (b)  $P[ T \geq 2.228 ]$  when  $r = 10$ .
- (c)  $P\{ |T| \leq 2.228 \}$  when  $r = 10$ .
- (d)  $P\{ -1.753 \leq T \leq 2.602 \}$  when  $r = 15$ .
- (e)  $P\{ 1.33 \leq T \leq 2.552 \}$  when  $r = 18$ .

5.7-2 Let  $T$  have a  $t$  distribution with  $r = 19$ . Find  $c$  such that

- (a)  $P[ |T| \leq c ] = 0.05$ .
- (b)  $P[ |T| \leq c ] = 0.01$ .
- (c)  $P[ T \leq c ] = 0.025$ .
- (d)  $P[ |T| \leq c ] = 0.95$ .

5.7-8 Find

- (a)  $F_{0.05}(5,9) = F_{5,9,.05}$
- (b)  $F_{0.025}(9,7) = F_{9,7,.025}$
- (a)  $F_{0.99}(8,5) = F_{8,5,.99}$
- (a)  $F_{0.95}(5,7) = F_{5,7,.95}$