© 2006 Pearson Education, Inc., Upper Saddle River, NJ. All rights reserved. This material is protected under all copyright laws as they currently exist. No portion of this material may be reproduced, in any form or by any means, without permission in writing by the publisher.

For exclusive use of adopters of the book *Digital Design Principles and Practices*, Fourth Edition, by John F. Wakerly, ISBN 0-13-186389-4.

3e8.28 8.208 The maximum delay from clock to output of a 74HCT74 flip-flop is 44 ns. For a 4-bit ripple counter, the delay ripples through four such stages for a total maximum delay of 176 ns. Similarly, the maximum delays using 74AHCT and 74LS74 flip-flops are 40 ns and 160 ns, respectively.