

69. **CLOTHING DISPLAY** An employee at a clothing store is creating a display. The display has 3 different mannequins. Each mannequin is to wear a different sweater and a different skirt. How many different displays can be created?

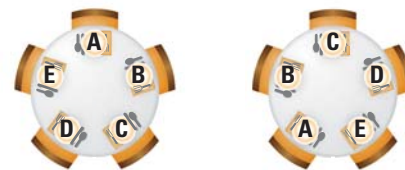


AnimatedAlgebra at classzone.com

70. **CROSS COUNTRY** Three schools are competing in a cross country meet. School A has 6 runners, school B has 5 runners, and school C has 4 runners. For scoring purposes, the finishing order of the meet only considers the school of each runner. How many different finishing orders are there for scoring purposes?

71. **CHALLENGE** You have learned that $n!$ represents the number of ways that n objects can be placed in a *linear* order, where it matters which object is placed first. Now consider *circular* permutations in which objects are placed in a circle, so that it does *not* matter which object is placed first.

- a. Suppose you are seating 5 people at a circular table. How many different ways can you arrange the people around the table?
- b. Find a formula for the number of permutations of n objects placed in clockwise order around a circle when only the relative order of the objects matters. *Explain* how you derived your formula.



The two arrangements shown represent the same permutation.

MIXED REVIEW FOR TAKS

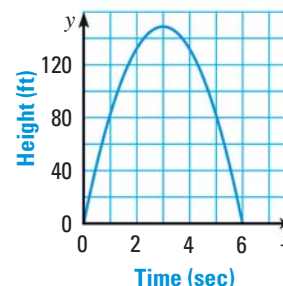
TAKS PRACTICE at classzone.com

REVIEW

Lesson 4.1;
TAKS Workbook

72. **TAKS PRACTICE** The graph shows the height of a toy rocket from the time it is launched to the time it lands on the ground. How much time elapses while the rocket is 80 feet or higher above the ground? **TAKS Obj. 5**

- (A) 3 sec (B) 4 sec
(C) 6 sec (D) 8 sec



REVIEW

TAKS Preparation
p. 146;
TAKS Workbook

73. **TAKS PRACTICE** Paul makes a scale model of an airplane. The actual airplane is 56 feet long with a wingspan of 37.5 feet. Paul's model is 14 inches long. What is the approximate wingspan of his model? **TAKS Obj. 9**

- (F) 9.0 in. (G) 9.4 in. (H) 18.7 in. (J) 22.5 in.