

PROBLEM SOLVING

EXAMPLE 3

on p. 42
for Exs. 52–53

52. **SWIMMING** You have budgeted \$100 to improve your swimming over the summer. At your local pool, it costs \$50 to join the swim association and \$5 for each swim class. Write and solve an inequality to find the possible numbers of swim classes you can attend within your budget.

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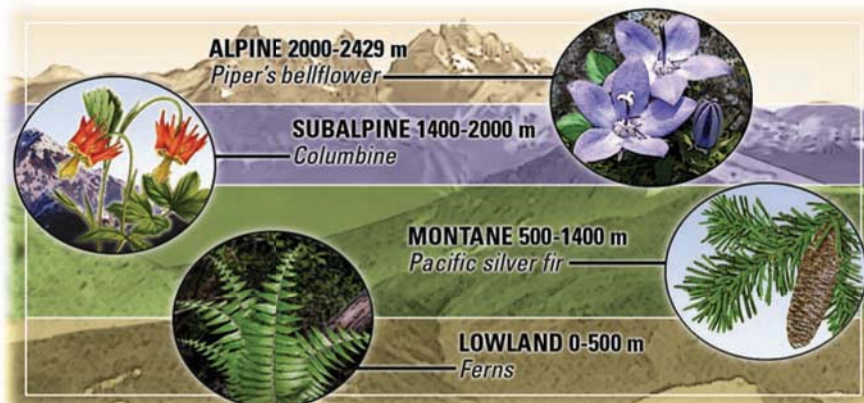
53. **VIDEO CONTEST** You and some friends have raised \$250 to help make a video for a contest. You need \$35 to buy videotapes. It costs \$45 per day to rent the video camera. Write and solve an inequality to find the possible numbers of days you can rent the video camera.

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54. **WAKEBOARDING** What you wear when you wakeboard depends on the air temperature. Copy and complete the table by writing an inequality for each temperature range. Assume each range includes the lower temperature but not the higher temperature. (The first inequality has been written for you.)

Temperature	Gear	Inequality
60°F to 65°F	Full wetsuit	$60 \leq T < 65$
65°F to 72°F	Full leg wetsuit	?
72°F to 80°F	Wetsuit trunks	?
80°F or warmer	No special gear	?

55. **BOTANY** In Olympic National Park in Washington, different plants grow depending on the elevation, as shown in the diagram. Assume each range includes the lower elevation but not the higher elevation.



- Write an inequality for elevations in the lowland zone.
 - Write an inequality for elevations in the alpine and subalpine zones combined.
 - Write an inequality for elevations *not* in the montane zone.
56. **TX TAKS REASONING** Canoe rental costs \$18 for the first two hours and \$3 per hour after that. You want to canoe for more than 2 hours but can spend no more than \$30. Which inequality represents the situation, where t is the total number of hours you can canoe?
- (A) $18 + t \leq 30$ (B) $18 + 3t \leq 30$
 (C) $18 + 3(t + 2) \leq 30$ (D) $18 + 3(t - 2) \leq 30$