

# Chapter 3 Problem Solving

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[1] \_\_\_\_\_

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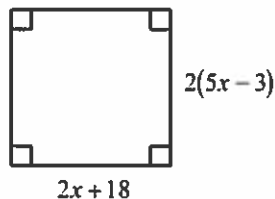
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6. Find the value of  $x$  so that the figure is a square.



7. The maximum weight allowed per car on The Wildcat carnival ride is 280 pounds. Your friend weighs 140 pounds. To be able to ride in a car together how much can you weigh? Write and solve an inequality.
8. Zoe makes \$12 an hour working at McWarner's Autobody. She plans to buy a camera, which costs \$288. Write and solve an inequality describing at least how long Zoe will have to work to be able to buy the camera.
9. You want to plant part of your field with wheat. The field is 180 feet wide and you have enough seeds to plant at most 48,600 square feet. How long can the wheat field be?
10. Which problem could be solved using the inequality  $2c < 56$ ?
- [A] Two equal-priced shirts came to under \$56.
- [B] Two students split a restaurant bill that came to \$56.
- [C] The product of 2 and a number is equal to 56.
- [D] Marty earned \$56 for 2 hours of work.
11. Akeem has \$85 in his savings account. He earns \$9.00 an hour filing papers. How many hours must he file papers in order to save enough money to buy a remote-controlled airplane which costs at least \$166? Write an inequality to represent the situation. Then solve the inequality.
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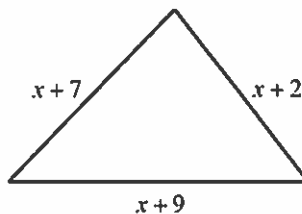
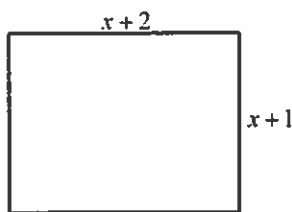
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12. The width of a rectangle is 33 centimeters. The perimeter is at least 324 centimeters. Write an inequality that represents all possible values for the length of the rectangle. Then solve the inequality.
13. The biology club at Jersey High School is sponsoring a dance to raise money for their spring project. They will charge \$4 per student admission, but must pay \$140 for publicity and chaperones. If  $n$  is the number of students who attend the dance, how many students must attend if the science club is to earn at least \$640?
- [A]  $n \geq 65$                       [B]  $n \geq 100$                       [C]  $n \geq 130$                       [D]  $n \geq 125$
14. You are planning a skating party at a rink that charges a basic fee of \$6.00 and \$7.50 per person for catered parties. You don't want to spend more than \$66.00. Write and solve an inequality to find the number of people who can attend the party.
- [A]  $7.5x + 6 \geq 66; x \geq 8$                       [B]  $7.5x + 6 > 66; x > 8$   
[C]  $7.5x + 6 \leq 66; x \leq 8$                       [D]  $7.5x + 6 < 66; x < 8$
15. Find the value of  $x$  so that the rectangle and the triangle have the same perimeter. What is the perimeter?



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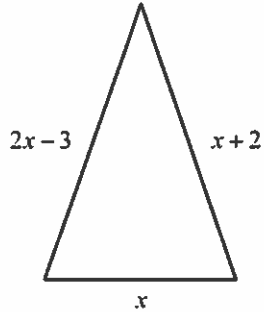
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16. A triangle is isosceles if it has two sides the same length. Find the value of  $x$  so that triangle  $ABC$  is isosceles.



[A] 7

[B] 4

[C] 6

[D] 5

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