

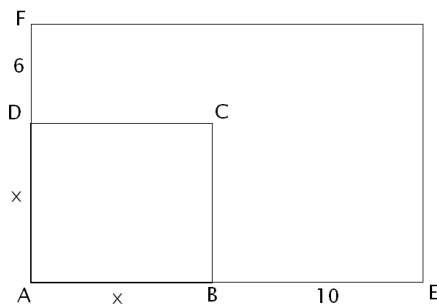
DIRECTIONS: Solve. Show all work, including the inequalities you use.

1. For the Hawks' 80 basketball games next year, you can buy separate tickets for each game at \$9 each, or you can buy a season ticket for \$580. At most how many individual games could you attend at the \$9 price before spending more than the cost of a season ticket?
At most 64 games
2. The usual toll charge to use the Bingham tunnel is 50 cents. If you purchase a special sticker for \$5.50, the toll is only 35 cents. At least how many trips through the tunnel are needed before the sticker costs less than paying for each trip separately?
At least 37 trips
3. The length of a rectangle is 5 cm more than twice its width. Find the largest possible width if the perimeter is at most 64 cm.
The largest possible width is 9 cm
4. The lengths of the legs of an isosceles triangle are integers. The base is half as long as each leg. What are the possible lengths of the legs if the perimeter is between 6 cm and 16 cm?
The possible lengths are 3 cm, 4 cm, 5 cm, or 6 cm
5. Find all sets of three consecutive *odd* integers with sums between 20 and 30.
{5, 7, 9} and {7, 9, 11}
6. Find all sets of three consecutive *even* integers with sums between 25 and 45.
{8, 10, 12}, {10, 12, 14}, and {12, 14, 16}
7. Jeannie's scores on her first four tests were 80, 65, 87, and 75. What will she have to score on her next test to obtain an average of at least 80 for the term?
Needs a score of at least 93

8. Jim's second test score was 8 points higher than his first score. His third score was 88. He had a B average (between 80 and 89, inclusive) for the three tests. What can you conclude about his first test score?

Jim's first test score was between 72 and 85.5 (inclusive)

9. The sides \overline{AB} and \overline{AD} of a square are extended 10 cm and 6 cm, respectively, to form sides \overline{AE} and \overline{AF} of a rectangle. At most how long is the side of the square if the perimeter of the rectangle is at least twice the perimeter of the square? **At most 8 cm**



10. The three sides of an equilateral triangle are increased by 20 cm, 30 cm, and 40 cm, respectively. The perimeter of the resulting triangle is between twice and three times the perimeter of the original triangle. What can you conclude about the length of a side of the original triangle?

The original side is between 15 cm and 30 cm

11. The telephone company offers two types of service. With Plan A, you can make an unlimited number of local calls per month for \$18.50. With Plan B, you pay \$6.50 monthly, plus 10 cents for each minute of calls after the first 40 minutes. At least how many minutes would have to use the phone each month to make Plan A the better option?

At least 160 minutes