

SUPPLEMENTARY SHEET 3  
**PERIMETER and COIN PROBLEMS**  
 ELEMENTARY ALGEBRA - MAT 0024  
 Professor Howard Sorkin

**PERIMETER PROBLEMS**

1. If the perimeter of an equilateral (all sides equal) triangle is 27 inches, find a side of the triangle.
2. Each of the equal sides of an isosceles (two sides equal) triangle is 5 times the third side. The perimeter of the triangle is 121 inches. Find the sides of the triangle.
3. The length of a rectangle is 3 times its width. The perimeter of the rectangle is 32 feet. Find the dimensions of the rectangle.
4. The length of a rectangle is 6 times its width. The perimeter of the rectangle is 98 feet. Find the dimensions of the rectangle.
5. The length of a rectangle is 4 times its width. The perimeter of the rectangle is 90 feet. Find the dimensions of the rectangle.
6. The second side of a triangle is 5 inches less than the first side. The third side is 12 inches more than the first side. The perimeter of the triangle is 40 inches. Find each side of the triangle.
7. The lengths of the sides of a triangle are represented by three consecutive even integers. If the perimeter of the triangle is 72 feet, find the lengths of its sides.
8. The length of a rectangle is 4 inches more than its width. The perimeter is 96 inches. Find the dimensions of the rectangle.
9. The length of a rectangle exceeds the width by 9 inches. The perimeter of the rectangle is 86 inches. Find the dimensions of the rectangle.
10. The length of a rectangle exceeds the width by 5 inches. The perimeter of the rectangle is 102 inches. Find the dimensions of the rectangle.
11. The width of a rectangle is 4 inches less than its length. The perimeter is 112 inches. Find the length and the width of the rectangle.
12. The perimeter of a rectangular plot of land is 312 feet. If the length is 6 feet more than 5 times the width, what are the dimensions?
13. The perimeter of a rectangular garden is 150 feet. Find its dimensions if the length is 5 feet less than three times the width.
14. The perimeter of a rectangular tennis court is 272 feet. If the length of the court exceeds twice its width by 10 feet, find its dimensions.

Answers:

1. 9 in.	2. 11 in., 55 in., 55 in.	3. W = 4, L = 12	4. W = 7, L = 42	5. W = 9, L = 36
6. 6, 11, 23	7. 22, 24, 26	8. W = 22, L = 26	9. W = 17, L = 26	10. W = 23, L = 28
11. W = 26, L = 30	12. W = 25, L = 131	13. W = 20, L = 55	14. W = 42, L = 94	

## COIN PROBLEMS

1. Joan has 3 times as many quarters as dimes. In all she has \$1.70. How many coins of each type does she have?
2. Ken has 5 times as many dimes as nickels. In all he has \$2.20. How many coins of each type does he have?
3. Dan has twice as many nickels as pennies and 5 times as many dimes as pennies. In all he has \$1.22. How many coins of each type does he have?
4. Monica has three times as many nickels as pennies and twice as many quarters as nickels. In all she has \$3.32. How many coins of each type does she have?
5. Mitch has \$4.55 in dimes and quarters. He has 7 more quarters than dimes. Find the number he has of each coin.
6. Sue has \$1.45 in nickels and dimes. The number of dimes exceeds the number of nickels by 4. Find the number she has of each kind.
7. Constance has \$2.80 in quarters and dimes. The number of quarters exceeds three times the number of dimes by 1. Find the number she has of each kind.
8. Dawn deposited \$5.30 in nickels, quarters, and dimes in her savings account. The number of dimes exceeded the number of nickels by 3, and the number of quarters was 20 less than the number of nickels. Find the number of each kind of coin she deposited.
9. A purse containing \$4.80 in quarters and dimes has, in all, 30 coins. How many of each kind are there?
10. A purse contains \$1.15 in nickels and dimes. There are 20 coins in all. How many of each kind are there?
11. In John's bank, there is \$1.17 in pennies, nickels, and dimes. In all there are 25 coins. If there are twice as many nickels as pennies, find how many of each kind there are.
12. Cathleen counted her money and found that her 35 coins which were nickels, dimes, and quarters were worth \$5.55. The number of dimes exceeded the number of nickels by 5. How many coins of each kind did she have?

Answers:

1. 2 D, 6 Q	2. 4 N, 20 D	3. 2 P, 4 N, 10 D	4. 2 P, 6 N, 12 Q	5. 8 D, 15 Q	6. 7 N, 11 D
7. 3 D, 10 Q	8. 25 N, 28 D, 5 Q	9. 18 D, 12 Q	10. 17 N, 3 D	11. 7 P, 14 N, 4 D	12. 7 N, 12 D, 16 Q