7.1 Application Problems

Solve.

1. The perimeter of a rectangle is 50 m. The width of the rectangle is 5 m less than the length. Find the length and width of the rectangle.

2. The perimeter of a rectangle is 120 ft. The length of the rectangle is twice the width. Find the length and width of the rectangle.

3. The width of a rectangle is 25% of the length. The perimeter is 250 cm. Find the length and width of the rectangle.

4. The width of a rectangle is 30% of the length. The perimeter of the rectangle is 338 ft. Find the length and width of the rectangle.

5. In an isosceles triangle, two sides are equal. The third side is 2 m less than one of the equal sides. The perimeter is 10 m. Find the length of each side.

6. The perimeter of a triangle is 33 ft. One side of the triangle is 1 ft longer than the second side. The third side is 2 ft longer than the second side. Find the measure of each side.

7. The perimeter of a rectangle is 42 m. The length of the rectangle is 3 m less than twice the width. Find the length and width of the rectangle.

8. The perimeter of a triangle is 20 ft. The first side is 1 ft less than twice the second side. The third side is 1 ft more than twice the second side. Find the measure of each side.

9. The perimeter of a triangle is 110 cm. One side is twice the second side. The third side is 30 cm more than the second side. Find the measure of each side.

10. In an isosceles triangle, two sides are equal. The third side is 50% of the length of one of the equal sides. Find the length of each side when the perimeter is 125 ft.

11. The perimeter of a rectangle is 56.24 m. The width of the rectangle is 0.84 m less than the length. Find the length and width of the rectangle.

12. In an isosceles triangle, two sides are equal. The length of one of the equal sides is 3.52 times the length of the third side. The perimeter is 10.43 m. Find the length of each side. Round to the nearest hundredth.

7.2 Application Problems

Solve.

13. In an equiangular triangle, all three angles are equal. Find the measures of the equal angles.

14. In an isosceles triangle, one angle is three times the measure of one of the equal angles. Find the measure of each angle.

15. In an isosceles right triangle, two angles are equal and the third angle is 90°. Find the measures of the equal angles.

16. One angle of a right triangle is 3° less than twice the measure of the smallest angle. Find the measure of each angle.

17. In an isosceles triangle, one angle is 12° more than twice the measure of one of the equal angles. Find the measure of each angle.

18. In an isosceles triangle, one angle is 5° less than three times the measure of one of the equal angles. Find the measure of each angle.

19. In a triangle, one angle is twice the measure of the second angle. The third angle is three times the measure of the second angle. Find the measure of each angle.

20. In a triangle, one angle is 5° more than the measure of the second angle. The third angle is 10° more than the measure of the second angle. Find the measure of each angle.

21. One angle of a triangle is three times the measure of the third angle. The second angle is 5° less than the measure of the third angle. Find the measure of each angle.

22. One angle of a triangle is twice the measure of the second angle. The third angle is three times the measure of the first angle. Find the measure of each angle.

23. The first angle of a triangle is twice the measure of the second angle. The third angle is 10° less than the measure of the first angle. Find the measure of each angle.

24. The first angle of a triangle is three times the measure of the second angle. The third angle is 33° more than the measure of the first angle. Find the measure of each angle.