Solutions to Even problems for Section 1.8 - pg. 64 - 67

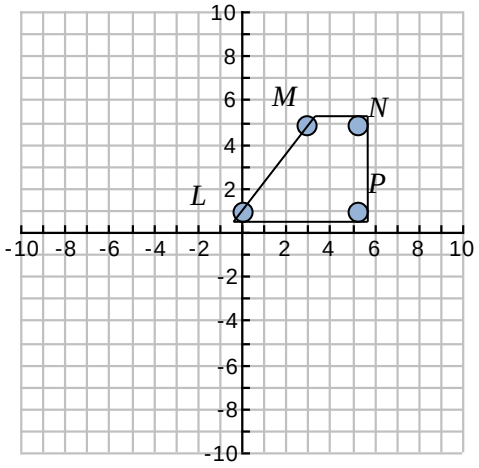
8. Perimeter is total distance around a figure; Add all sides.

Since all 4 sides are 9 cm, 9 + 9 + 9 + 9 = 36 cm.

12. Circumference = pi * diameter, C = Pi * d or Circumference = pi * 2 * radius, C = 2* pi * r

Since diameter is given as 3.7 in: C = pi * 3.7 = 3.14 * 3.7 = 11.6 in.

16.



LM = $\sqrt{(0-3)^2+(1-5)^2} = \sqrt{(-3)^2+(-4)^2} = \sqrt{9+16} = \sqrt{25} = 5$

MN = $\sqrt{(3-5)^2+(5-5)^2} = \sqrt{(-2)^2+(0)^2} = \sqrt{4+0} = \sqrt{4} = 2$

NP = $\sqrt{(5-5)^2+(5-1)^2} = \sqrt{(0)^2+(4)^2} = \sqrt{0+16} = \sqrt{16} = 4$

LP = $\sqrt{(0-5)^2+(1-1)^2} = \sqrt{(-5)^2+(0)^2} = \sqrt{25+0} = \sqrt{25} = 5$

Perimeter = 5 + 2 + 4 + 5 = 16 units.

20. Area of Rectangle = base x height; A = B x H

First convert 2 ft, 3 in. to inches (12 inches = 1 foot): 2 x 12 + 3 = 27 inches.

A = 27 x 6 = 162 square inches

26. Area of a circle = pi * radius squared; A_o = pi *r^2 A = pi * $.1^2$ = .01 pi sq. m.

30. $A_o = pi * r^2$ $A = pi * 12^2 = 144 * pi = 452.4$ sq. in.

32. Area of shaded region = Total Area - Area of smaller Area

Area of shaded region = Area of Rectangle - Area of Square;

Area = (Base x Height) - (Side x Side); A = (B * H) - (S * S)

A = (8 * 12) - (4 * 4) = 96 - 16 = 80 sq. in.

40. a. Each square is 1 in by 1 in = 1 square inch; There are 30 squares so 30 x 1 = 30 square inches

b. 4 x 4 = 16 sq. in. ; 3 x 3 = 9 sq. in. ; 2 x 2 = 4 sq. in. ; 1 x 1 = 1 sq. in.

c. If you add the individual areas found in part (b), they total to the area found in part (a).

This supports Postulate 1 - 10: Area Addition Postulate - The area of a region is the sum of the areas of its non-overlapping parts.

46. Area of shaded region = Total Area - Area of smaller Area

Area of shaded region = Area of Rectangle - Area of Rectangle; A = (B * H) - (B * H)

A = (5 * 7) - (4 * 2) = 35 - 8 = 23 sq. cm.

50. Area of Rectangle = Base x Height; A= B * H ; You know the Area and the Base so substitute these in.

$(4x^2 - 2x) = x *$ Height Divide both sides by x: $(4x - 2) =$ Height which is answer D