ANSWERS TO EXERCISE IN COMPREHENSIVE PG ,62.

PAGE 61-62

No1. Load x load arm = effort x effort arm.

40kg x Xm + 50Kg x (2m+X) = 40Kg x 7m

40xX + 50x2 + 50xX =40x7

40X + 100 + 50X =280

40X + 50X +100 =280

90X + 100 =280

90X +100-100 =280-100

90X =180

90x/90 =180/90

X=2

Therefore thevalue of X IS 2m

No2.load x load arm = effort x effort arm.

5Kg x 4m = 2kg x 2m + Xkg x (2m+2m)

5x4 = 2x2 + X x (2+2)

20 = 4 + 4X

20-4 =4-4 + 4X

16 =4X

16/4 =4X/4

4 =X

Therefore, X = 4Kgf.

No3. Force x distance = force x distance

45g x X = 25g x 3m + 15g x (3m + 4m)

45 x X =25x3 + 15x7

45X =75 + 105

45X = 180

45X/45 =180/45

X = 4m

Therefore the value of X is 4m.

No4.load x load arm = effort x effort arm

40g x 2m + 30g x (3m+2m) = 25g x 2m +X x (4m+2m)

40 x 2 + 30 x 5 =25 x 2 + 6X

80 + 150 =50+6x

230 =50+6X

230-50 =50-50 + 6X

180 =6X

180/6 =6X/6

30 =X

Therefore the value of X is 30g.

Thank you for your effort