

**EXERCISE XXIX.** Page 156.

1. 6 pds.
2.  $10\sqrt{3}$  pds.
3. 5 gm.
4. 13 pds.
5. (1) 30 pds., (2)  $30\sqrt{2}$  pds.,  
(3)  $30\sqrt{3}$  pds.
6. (1) 8 pds., (2) 32 pds.
7. 60 pds.
8. (1)  $(50\sqrt{3}-5)$  pds., (2)  
 $(50\sqrt{3}+5)$  pds.
9. (1)  $2\frac{1}{2}$  pds., (2)  $7\frac{1}{2}$  pds., (3)  
 $(\frac{4}{3}\sqrt{15}-2\frac{1}{2})$  pds.

**EXERCISE XXX.** Page 167.

1. 2 pds. ; 10.198 pds.
2.  $\frac{1}{3}$ .
3. 4.714.
4.  $\sqrt{3}$ .
5.  $\sqrt{3}$ ; 1;  $\frac{\sqrt{3}}{3}$ .
6.  $\frac{1}{\sqrt{3}}$ .
7. 11.732 pds.
8. 36 pds.
9. 10 pds.
10. .732.
11.  $24\frac{1}{2}$  pds.
12.  $\frac{4}{3}\sqrt{3}$  pds.
13. .268.
14.  $30^\circ$ .
17.  $g(\sin \theta - \mu \cos \theta)$ .

**EXERCISE XXXI.** Page 176.

1. (1) 4, (2) 576.
2. (1) 6, (2) 54.
3. (1) 50, (2) 500,000.
4. (1) 0.2, (2) 0.8.
5. 80 pds.
6.  $\frac{2}{3}$  pds.
7.  $30\frac{1}{2}$  pds.
8. 20 kgm.
9.  $31\frac{1}{4}$  gm.
10. 1.5 sq. m.
11.  $\frac{31}{8}$  in.
12. 35437.5 gm.
13. 1919 $\frac{3}{4}$  pds.
14. 7 kgm.

**EXERCISE XXXII.** Page 186.

1. 9.122 pds.
2. 0.0375 gm.
3. 11.5 pds.
4. 2.3 gm. per sq. mm.
5. 8:9.
6. 1:100.
7. 5:2:3.
8. 4:5.
9. 60 ft.
10. 9 m.
11.  $31\frac{1}{4}$ .
12. 9 kgm.
13. (1)  $230\frac{3}{4}$  ft., (2)  $1\frac{1}{2}$  ft.
14. 30 ft.
15. 1360.
16. 73.53 cm.
17. 4100.
18. 125 pds.

**EXERCISE XXXIII.** Page 191.

1. 5000 pds.
2. 30,000 kgm.
3. 3750 pds.
4. 107,500 kgm.
5. 77,000 pds.
6. 37,500 pds.
7. 72,000 kgm.