

Exercise 184. Page 202

2. 6558 = $\overline{\text{VMDLVIII}}$; 244 = CCXLIV; 2683 = MMDCLXXXIII.
The dash over the symbol increases its value 1000 times.
4. 25%. 5. $7056 = 2^4 \times 3^2 \times 7^2$; $\therefore$ sq. rt. = $2^2 \times 3 \times 7 = 84$.
6. 720 revolutions. 7. 7 ft. 8. $\frac{217}{36000}$; $\frac{1}{120}$.
9. $16 : 35$. ($9\frac{3}{7} : 20\frac{5}{8} = \frac{66}{7} : \frac{165}{8} = \frac{2}{7} : \frac{5}{8} = \frac{16}{56} : \frac{35}{56} = 16 : 35$).
10. $127.27 \dots \text{ft.} = \sqrt{(90)^2 + (90)^2} \text{ ft.}$

Exercise 185. Page 202

1. 59520.4 . ($.0018 + .000106 + .84 + .0509$) $\div .000015$.
2. $80.2285 \dots \text{lb.}$ (1 bu. = $277.27 \times 8 \text{ cu. in.} = 2218.16 \text{ cu. in.}$).
3. 1st No. + 2nd No. = 100; 2 times 1st No. - 2nd No. = 10;
 $\therefore$ 3 times 1st No. = 110; 1st No. = $36\frac{2}{3}$; 2nd No. = $63\frac{1}{3}$.
4. $\$128 = \$176 \times \frac{10}{11} \times \frac{4}{5}$. 5. $35\frac{7}{8}\%$.
6. $\$4901.96 = \$5000 \times \frac{100}{102}$. 7. $\$9500$.
8. 24; 32; 48. ($2\frac{1}{2} : 3\frac{1}{3} : 5 = 15 : 20 : 30 = 3 : 4 : 6$).
9. $2\frac{2}{5} \text{ ft.} = 2 \text{ ft.}$ $10\frac{4}{5} \text{ in.} = \frac{4275}{62\frac{1}{2} \times 7\frac{1}{2} \times 3\frac{1}{8}} \text{ ft.}$
10. $43\frac{1}{5} \text{ min.} = \frac{10 \times 1728}{25 \times 16} \text{ min.}$ 11. $142 \text{ yd.} = \frac{35\frac{1}{2}}{36} \text{ of } 144 \text{ yd.}$
12. 35.775 ft. 13. $\$62.40$. 14. $13\frac{3}{4} \text{ in.}$

Exercise 186. Page 204

1. $7.864 \dots \text{oz.}$ 2. $172\frac{1}{8} \text{ sq. ft.} = 19\frac{1}{8} \text{ sq. yd.}$
3. $16\sqrt{3} \text{ sq. in.} = 27.7 \dots \text{sq. in.}$ (Altitude = $\sqrt{8^2 - 4^2} \text{ in.} = 6.929 \dots \text{in.}$).
4. $36\sqrt{3} \text{ sq. in.} = 62.35 \dots \text{sq. in.}$ (Altitude = $\sqrt{12^2 - 6^2} \text{ in.} = 10.392 \dots \text{in.}$).
5. 5280 sq. ft. 6. 80. (One of each would cost \$45.50).
7. 6912. 8. 896 : 165. 9. 10 hr. 25 min.
10. $13794\frac{1}{2} \text{ sq. ft.}$
11. 144 sq. in. (Area of trapezoid = $\frac{3}{4}$ area of the original triangle).
12. $2940 \text{ lb.} = 70 \times 35 \times 16 \times 62\frac{1}{2} \times .0012 \text{ lb.}$
13. $3600 \text{ lb.} = 240 \times 60 \times \frac{25}{100} \text{ lb.}$