

1. 128
2. $\frac{21}{2}$
3. 7
4. $\frac{\pi T^2}{C}$
5. (3, 6)
6. $\frac{1}{2} \arctan t + \frac{1}{4} \ln \left(\frac{1+t}{1-t} \right)$
or
$$\frac{\arctan t + \operatorname{arctanh} t}{2}$$
7. $\frac{1}{3^{1/3}}$
8. $a + 2b + c$
9. 9
10. 2400
11. 252
12. 27
13. $\frac{116\sqrt{2}}{17}$
14. 14
15. $\frac{1}{315}$
16. $\frac{3}{5}$
17. 336
18. $\frac{2}{5}$
19. {4, 10}
20. $\frac{e}{2}$