1 Derivatives

1. $\frac{d}{dy}\sqrt[3]{y}$
2. $\frac{d}{ds}\sqrt[3]{s}$
3. $\frac{d}{dq}\sqrt[3]{q}$
4. $\frac{d}{dd}\sqrt[3]{d}$
5. $\frac{d}{dx}x^5$
6. $\frac{d}{dk}4^k$
7. $\frac{d}{da}10^a$
8. $\frac{d}{dy}2^{-y}\sqrt[3]{y}$
9. $\frac{d}{ds}9^s$
10. $\frac{d}{dm}\coth(m)$
11. $\frac{d}{da}4^a$
12. $\frac{d}{dt}\sqrt[3]{t}$
13. $\frac{d}{da}\operatorname{csch}(a)$
14. $\frac{d}{da}a^2$
15. $\frac{d}{d\theta}\theta^7$
16. $\frac{d}{dc}c^7$
17. $\frac{d}{dr}7^r$
18. $\frac{d}{dz}z^7$
19. $\frac{d}{dr}r^2$

2 Answers

1. $\frac{1}{3y^{\frac{2}{3}}}$
2. $\frac{1}{3s^{\frac{2}{3}}}$
3. $\frac{1}{3q^{\frac{2}{3}}}$
4. $\frac{1}{3d^{\frac{2}{3}}}$
5. $5x^4$
6. $4^k\log(4)$
7. $10^a\log(10)$
8. $-2^{-y}\sqrt[3]{y}\log(2)+\frac{2^{-y}}{3y^{\frac{2}{3}}}$
9. $9^s\log(9)$
10. $-\frac{1}{\sinh^2(m)}$
11. $4^a\log(4)$
12. $\frac{1}{3t^{\frac{2}{3}}}$
13. $-\coth(a)\operatorname{csch}(a)$
14. $2a$
15. $7\theta^6$
16. $7c^6$
17. $7^r\log(7)$
18. $7z^6$
19. $2r$