

BUSINESS ANALYTICS MATH TASKS FOR

PRE - SESSION OPT-OUT EXAM - 2018.08.23-26

1, ELEMENTARY ALGEBRA

$$1.1, \frac{2^{17}}{2^3 \cdot 2^5} = \underline{\underline{2^9}}$$

$$1.2, \begin{aligned} 6^2 \cdot 6^x &= 6^6 & / : 6^2 \\ 6^x &= 6^4 & / \log_6 \\ \log_6 6^x &= \log_6 6^4 \\ \underline{\underline{x=4}} \end{aligned}$$

$$1.3, \begin{aligned} x \cdot y &= 5 \\ x^3 \cdot y^3 &= (x \cdot y)^3 = 5^3 = \underline{\underline{125}} \end{aligned}$$

$$1.4, \frac{\sqrt{2^{10}}}{\sqrt{4^5}} = \frac{2^{10 \cdot \frac{1}{2}}}{2^{2 \cdot 5 \cdot \frac{1}{2}}} = \frac{2^5}{2^5} = 2^0 = \underline{\underline{1}}$$

$$1.5, \begin{aligned} (a) \ x + y &= y + x & \text{TRUE} \\ (b) \ x(y+z) &= xy + xz & \text{TRUE} \\ (c) \ x^{y+z} &\neq x^y + x^z & \text{FALSE} \\ &\quad \downarrow & \\ &\quad x^y \cdot x^z & \\ (d) \ \frac{x^y}{x^z} &= x^{y-z} & \text{TRUE} \end{aligned}$$

$$1.6, \begin{aligned} \frac{2x-5}{2} &\geq 4 \\ 2x-5 &\geq 8 \\ 2x &\geq 13 \\ x &\geq 6.5 \end{aligned}$$