**Course: SAT ACT Prep**

**Subject: Mathematical Reasoning**

**Topic: Arithmetic**

**Subtopic: Rules of Exponents**

**Document: Quick Drill B Resource**

**Lesson Number: 1**

**Reference Number: 1000-8**

*https://youtube.com/c/MrMattTheTutor*



1. If $4^{(x-4)}=8^{-(x+6)}$, then what is the value of X?
	1. -5
	2. -2
	3. 2
	4. 5
2. If $4^{(-5x+15)}=32^{-(x+3)}$, then what is the value of X?
	1. 3
	2. 6
	3. 9
	4. 12
3. If $27^{(8x-10)}=81^{(3x+4.5)}$, then what is the value of X?
	1. 2
	2. 4
	3. 6
	4. 8
4. Which of the following expressions is equivalent to $\left(4X^{2}\right)^{\frac{-2}{3}}$?
	1. $\left(\frac{1}{\sqrt[3]{2X}}\right)$
	2. $\left(\frac{1}{\sqrt[3]{2X^{2}}}\right)$
	3. $\left(\frac{1}{X\sqrt[3]{2X}}\right)$
	4. $\left(\frac{1}{2X\sqrt[3]{2X}}\right)$
5. Which of the following expressions is equivalent to $\left(8X^{2}\right)^{\frac{-3}{2}}$?
	1. $\left(\frac{\sqrt{2}}{32X^{3}}\right)$
	2. $\left(\frac{\sqrt{2}}{8X^{3}}\right)$
	3. $\left(\frac{\sqrt{2}}{16X^{3}}\right)$
	4. $\left(\frac{\sqrt{2}}{4X^{3}}\right)$
6. Which of the following expressions is equivalent to $\left(9X^{3}\right)^{\frac{-3}{2}}$?
	1. $\left(\frac{\sqrt{X}}{27X^{2}}\right)$
	2. $\left(\frac{\sqrt{X}}{27X^{3}}\right)$
	3. $\left(\frac{\sqrt{X}}{27X^{4}}\right)$
	4. $\left(\frac{\sqrt{X}}{27X^{5}}\right)$