**Course: SAT ACT Prep**

**Subject: Mathematical Reasoning**

**Topic: Arithmetic**

**Subtopic: Solving with Substitution & Conceptually**

**Document: Quick Drill B Resource**

**Lesson Number: 2**

**Reference Number: 1001-8**

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



1. If M and N are positive prime integers greater than 2 and Q is an even integer, which of the following statements is/are true?
2. $(M+N)(2+M+N)$ is an odd integer
3. $(3N+M)^{2}+(3+2N)^{2}$ is an odd integer
4. $(5+Q+M)-(3M+N)^{3}$ is an even integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III
5. If M and N are positive prime integers greater than 2 and Q is an even integer, which of the following statements is/are true?
6. $(M+N-Q)+(2+N+Q)$ is an odd integer
7. $(Q^{2}+M^{2})(2+Q+N)^{2}$ is an odd integer
8. $(5+M+Q)(4-M-N)^{3}$ is an odd integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III
9. If M and N are positive prime integers greater than 2 and Q is an even integer, which of the following statements is/are true?
10. $\left(QNM\right)^{3}\left(5QN\right)^{2}$ is an even integer
11. $\left(3+M)(2+Q\right)^{2}+(6N)^{2}$ is an even integer
12. $\left(5MQ\right)^{2}\left(3+M+N\right)^{3}$ is an even integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III
13. If M and N are integers less than zero and Q is an integer greater than zero, which of the following statements is/are true?
14. $\left(MNQ\right)^{5}×\left(2MQ\right)^{3}$ is a negative integer
15. $\left(3NQ\right)^{7}÷-\left(5NM\right)^{2}$ is a negative integer
16. $\left(-2MN\right)^{2}×\left(-3MNQ\right)^{7}$ is a negative integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III
17. If M and N are integers less than zero and Q is an integer greater than zero, which of the following statements is/are true?
18. $\left(MQN\right)^{3}×-\left(3MQ\right)^{2}$ is a negative integer
19. $\left(3MN\right)^{2}÷\left(5NQM\right)^{3}$ is a positive integer
20. $\left(-2NQ\right)^{2}×\left(-3MNQ\right)^{3}$ is a negative integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III
21. If M and N are integers less than zero and Q is an integer greater than zero, which of the following statements is/are true?
22. $\left(MQ\right)^{2}×-\left(MN\right)^{3}$ is a negative integer
23. $-\left(-3MN\right)^{3}÷-\left(-5QM\right)^{2}$ is a negative integer
24. $\left(2NQ\right)^{8}×\left(-3NQ\right)^{6}$ is a negative integer
	1. Statements I and II only
	2. Statements I and III only
	3. Statements II and III only
	4. Statements I, II, and III