**Course: SAT ACT Prep**

**Subject: Mathematical Reasoning**

**Topic: Arithmetic**

**Subtopic: Solving with Substitution & Conceptually**

**Document: Quick Drill A Resource**

**Lesson Number: 2**

**Reference Number: 1001-7**

*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. $MN+2MN$ is an odd integer
3. $3M^{2}+2N^{2}$ is an even integer
4. $5Q-3N^{3}$ 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
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. $MNQ+2NQ$ is an even integer
7. $Q^{2}M^{2}+2QN^{2}$ is an even integer
8. $5MQ-4MN^{3}$ 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
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. $\left(Q-M\right)^{3}+\left(35MN\right)^{2}$ is an odd integer
11. $\left(37M+29Q\right)^{2}+17N^{2}$ is an even integer
12. $\left(85Q\right)^{2}-\left(93N\right)^{3}$ 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
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. $\left(MNQ\right)^{2}×\left(2MQ\right)^{3}$ is a positive integer
15. $\left(-3MQ\right)^{3}÷\left(5NM\right)^{2}$ is a positive integer
16. $\left(-2MN\right)^{3}×\left(-3MNQ\right)^{3}$ is a positive 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. $\left(MN\right)^{3}×\left(-3MQ\right)^{2}$ is a positive integer
19. $\left(3MN\right)^{2}÷\left(5NQM\right)^{3}$ is a positive integer
20. $\left(-2MN\right)^{2}×\left(-3MNQ\right)^{3}$ is a positive 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. $\left(-NQ\right)^{2}×\left(-2MNQ\right)^{3}$ is a negative integer
23. $\left(-3MN\right)^{3}÷\left(-5QM\right)^{2}$ is a negative integer
24. $\left(2MNQ\right)^{3}×\left(-3NQ\right)^{3}$ 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