

Multiplication Madness

NAME _____

Complete each problem and observe the patterns of integer multiplication.

1. $4 \cdot -6 =$

2. $(-2 \cdot 5) \cdot 3 =$

3. $(-6 \cdot 2)(1 \cdot 3) =$

4. Each problem above has _____ negative factors.

5. Each product is (positive / negative).

6. $-9 \cdot -6 =$

7. $(-2 \cdot 4) \cdot -3 =$

8. $(-5 \cdot -2)(2 \cdot 3) =$

9. Each problem above has _____ negative factors.

10. Each product is (positive / negative).

11. $-6 \cdot -7 \cdot -1 =$

12. $(-5 \cdot -4) \cdot -3 =$

13. $(-5 \cdot -1)(2 \cdot -3) =$

14. Each problem above has _____ negative factors.

15. Each product is (positive / negative).

16. $-9 \cdot -7 \cdot -1 \cdot -1 =$

17. $(-2)(-4)(-3)(-1) =$

18. $(-3 \cdot -2)(-7 \cdot -1) =$

19. Each problem above has _____ negative factors.

20. Each product is (positive / negative).

21. Draw a conclusion about the product of positive and negative integers.

Use the conclusion you drew on the previous page to answer the following questions...

22. $-1 \cdot -2 \cdot -3 \cdot -4 \cdot -5 \cdot -6 =$

23. $-48 \cdot -1 \cdot -1 \cdot 1 \cdot -1 \cdot 1 =$

24. Without solving, Anna says the value of z must be negative.

$$\frac{-184}{152} \times \frac{-86}{120} \times \frac{54}{89} \times \frac{-749}{126} = z$$

Is Anna correct? Explain why or why not.

25. Without solving, Drew says the value of z must be negative.

$$\frac{-187}{152} \times \frac{86}{126} \times \frac{-54}{140} \times \frac{49}{126} = z$$

Is Drew correct?

Choose the answer below that best describes why Drew is or is not correct?

- a. Yes, because the difference of an even number of negative numbers is positive.
- b. No, because the difference of an even number of negatives numbers is positive.
- c. No, because the product of an even number of negative numbers is positive.
- d. Yes, because the product of an even number of negative number is positive.

26. In the expression $p \times q$, $p > 0$ and $q > 0$. What must be true?

- a. $p \times q$ will always be negative.
- b. $p \times q$ may be positive or negative, depending on which number has the larger absolute value.
- c. $p \times q$ will always be positive.
- d. Not enough information provided.