

Integers

Rule 1: When adding two positive numbers, find the sum of their absolute values, the answer is positive.

Rule 2: When adding two negative numbers, find the sum of their absolute values, the answer is negative.

Rule 3: When adding one positive and negative number, find the difference between their absolute values and use the sign of the integer with the greatest absolute value.

Rule 4: When subtracting numbers with different signs, change the sign of the subtrahend (second number) and add using Rule 1, 2, or 3.

Rule 5: When multiplying numbers with the same sign, the answer is positive.

Rule 6: When multiplying numbers with different signs, the answer is negative.

Example:

$$\begin{aligned} \text{Simplify } & (+5)(-4)(-3). \\ & (+5)(-4)(-3) = (-20)(-3) \text{ R6} \\ & = 60 \text{ R5} \end{aligned}$$

Hint: As with all rules in math, these rules work for binary operations, that is 2 numbers at a time

Simplify the following, before doing each problem write the rule to be used.

1. $-16 \times 18 \times 6$

2. $4 \times 19 \times -19$

3. $-10 - (-1) - 6$

4. $-6 - 11 - 4$

5. $13 \times 11 \times -19$

6. $-16 \div 2 \div -1$

7. $-20 - 7 + 6$

8. $10 - 8 - 3$

9. $2 \times -10 \times -8$

10. $-2 - (-19) - (-1)$

11. $14 \times -7 + 17$

12. $-2 - 9 - 7$

13. $19 - 20 - 16$

14. $-3 + 6 + 7$

15. $-16 + 9 + 18$

16. $16 - (-1) - (-8)$

17. $11 - (-12) - (-10)$

18. $-6 \times -18 \times 13$

19. $-7 - 9 - 2$

20. $19 - 5 + 3$

21. $-7 - (-17) - 2$

22. $13 - 5 + 9$

23. $-120 \div -5 \div -8$

24. $5 - 15 + 8$

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1. $-15 + 9 + 17$

2. $14 \times 17 \times -8$

3. $-9 - 17 + 15$

4. $-20 - (-19) - 13$

5. $-12 \div -6 \div -1$

6. $-9 - 2 - 9$

7. $-11 - 4 - 7$

8. $-2 - (-18) \times 17$

9. $100 \div 2 \div 5$

10. $-13 \times 13 \times 10$

11. $24 \div 6 \div 4$

12. $100 \div -2 \div 10$

13. $-8 \times 14 \times -14$

14. $-3 \times -1 \times 18$

15. $7 + 9 - 1$

16. $-56 \div 7 \div 1$

17. $18 \div 1 \div -3$

18. $18 - 6 - (-8)$

19. $-128 \div 4 \div 4$

20. $54 \div -9 \div -3$

21. $-10 - 4 - 20$

22. $8 - 8 - 20$

23. $2 \times -8 \times 13$

24. $9 - (-3) - (-10)$

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Simplify the following, before doing each problem write the rule to be used.

1. $560 \div -10 \div 7$
2. $-7 + 8 - 2$
3. $210 \div -10 \div 7$
4. $10 \times -12 \times -20$
5. $15 - (-12) - (-13)$
6. $11 \times 2 \times -12$
7. $6 + 10 - 17$
8. $18 + 13 + 18$
9. $-17 \times -1 \times 8$
10. $8 - (-3) - (-5)$
11. $6 - (-7) - (-14)$
12. $19 \times 1 \times -4$
13. $10 - 1 - 20$
14. $-11 - (-2) - 15$
15. $5 + 11 + 7$
16. $17 - 13 - 7$
17. $13 - 4 + 16$
18. $-160 \div 10 \div -8$
19. $-19 \times -6 \times -7$
20. $6 - (-16) - 18$
21. $9 - 4 - 12$
22. $200 \div -4 \div 10$
23. $-50 \div -5 \div 2$
24. $15 + 9 + 8$