

WHOLE NUMBER OPERATIONS.

1. $578 + 436 + 1095$

Be able to borrow with 0's.

2. $70021 - 6854$

Check your answer using addition.

3. 847×329

4. $7488 \div 36$

Check your answer using multiplication.**ROUNDING WHOLE NUMBERS.** Must know place values to round.*Example:* Round **85,345** to the nearest thousand.

millions	hundred-thousands	ten-thousands	thousands	hundreds	tens	ones
		8	5	3	4	5

- Find the thousands place, then look at the value next to it.
- If it's 5 or greater, add 1 to the number in the thousands place and replace everything to the right with 0's.
- If it's less than 5, then leave the number in the thousands place as it is and replace everything to the right with 0's.

*Therefore **85,345** rounds to **85,000**

- Round **136,470** to the nearest ten-thousand.
- Round **3,998** to the nearest ten.
- Round **56,057** to the nearest hundred.
- Round **9,225,816** to the nearest million.

ROUNDING DECIMALS. Must know place values to the right of decimal point to round.

Example: Round **2.0665** to the nearest hundredth.

ones	.	tenths	hundredths	thousandths	ten-thousandths	hundred-thousandths	millionths
2	.	0	6	6	5		

- Find the hundredths place, then look at the value next to it.
- If it's 5 or greater, add 1 to the number in the hundredths place and eliminate everything to the right.
- If it's less than 5, then leave the number in the hundredths place as it is and eliminate everything to the right.

*Therefore **2.0665** rounds to **2.07**

- Round **0.361283** to the nearest hundred-thousandth.
- Round **758.074** to the nearest tenth.
- Round **492.56** to the nearest whole (ones place).
- Round **0.003291** to the nearest thousandth.
- Round \$ **50.6275** to the nearest cent (hundredths place) .

COMPARING NUMBERS.

-() Opposite value of a number changes the sign of the number.

| | Absolute value of a number is its distance from zero. Distance can only be positive or 0.

Example: $-(7) = -7$ $-(-7) = 7$

Example: $|-6| = 6$ $|6| = 6$ $|6 - 6| = 0$

Fill in the blank with one of the symbols below to make the sentence true.

< (less than)

> (greater than)

= (equal)

14. $-(9)$ _____ $-(8)$

15. $-(-5)$ _____ $-|-5|$

16. -69.9 _____ -70

INTEGER ADDITION AND SUBTRACTION.

When **adding** integers, use the following rules:

- If the signs are the same, add the absolute value of the numbers together, and keep the sign.
Example: $-6 + -15$ Add $6 + 15$ to get 21 then keep the sign so the answer would be -21
- If the signs are different, subtract the absolute value of the numbers, and take the sign of the number with the larger absolute value.
Example: $-6 + 15$ Subtract $15 - 6$ to get 9 then take the sign of the 15 which is positive, so the answer would be 9.

17. $21 + -4$

18. $-103 + 88$

19. $-35 + 35$

20. $-79 + -83$

When **subtracting** integers, **unless both numbers are positive**, rewrite the problem as adding the opposite, and then use the addition rules.

Example: $12 - 4$ Both numbers being subtracted are positive so leave as is. The answer would be 8.

Example: $12 - (-4)$ You are subtracting a negative 4. So you rewrite it as adding a positive 4. It would look like this $12 + 4$ therefore the answer would be 16.

Example: $-12 - 4$ You are subtracting a positive 4. So you rewrite it as adding a negative 4. It would look like this $-12 + -4$ therefore the answer would be -16 .

Example: $-12 - (-4)$ You are subtracting a negative 4. So you rewrite it as adding a positive 4. It would look like this $-12 + 4$ therefore the answer would be -8 .

21. $62 - 34$ Answer _____

22. $441 - (-68)$ Rewrite as _____

Answer _____

23. $53 - 100$ Rewrite as _____

Answer _____

24. $-25 - (-89)$ Rewrite as _____

Answer _____

25. $-78 - (73)$ Rewrite as _____

Answer _____

INTEGER MULTIPLICATION AND DIVISION.

When multiplying and dividing integers, use the following rules:

- a. If the signs are the same, the result will be positive.

Example: $-7 \times -4 = 28$ same as $(-7)(-4) = 28$ same as $-7(-4) = 28$

Example: $-54 \div -9 = 6$ same as $\frac{-54}{-9} = 6$

- b. If the signs are different, the result will be negative.

Example: $-7 \times 4 = -28$ same as $(-7)(4) = -28$ same as $-7(4) = -28$

Example: $-54 \div 9 = -6$ same as $\frac{-54}{9} = -6$

26. $-8(15)$

27. $-72 \div -12$

28. $(-44)(-3)$

29. $\frac{468}{-6}$

30.

31.

Multiplication with 0.

Any number multiplied by 0 is 0.

Example: $0 \times -56,324 = 0$

Division with 0.

Zero divided by any number other than 0, equals 0.

Example: $0 \div -11 = 0$ same as $\frac{0}{-11} = 0$

A number cannot be divided by 0. It is undefined.

Example: $188 \div 0 = \text{undefined}$ same as $\frac{188}{0} = \text{undefined}$

32. $\frac{-305}{0}$

33. 14×0

34. $\frac{0}{57}$

35. $0(-612)$