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| Course: MATH 1500-Online |  |

1. Use either < or > to make this a true statement.
$12 \square 18$
$12 \square 18$
2. Insert < or > between the pair of integers to make a true statement.

$$
-24
$$

$$
-34
$$

$-24$ $\qquad$ $-34$
3. Use either < or > to make this a true statement.
$-11 \square 0$
$-11$ $\qquad$ 0
4. Make the statement true by replacing the $\square$ symbol with either the $>$ or $<$ symbol.
$-10.3 \square-10 \frac{1}{3}$
-10.3(1) $\qquad$ $-10 \frac{1}{3}$
(1)
5. Make a number line and mark the points indicated.

$$
-4.4,-5.1,-4 \frac{1}{2},-5 \frac{1}{2}
$$

Plot - 4.4.


Plot -5.1.


Plot $-4 \frac{1}{2}$.


Plot $-5 \frac{1}{2}$.

6. Make a number line and mark the points indicated.

$$
-0.9,-1 \frac{1}{2},-2.6,-1 \frac{5}{8}
$$

Plot -0.9.


Plot $-1 \frac{1}{2}$.


Plot - 2.6.


Plot $-1 \frac{5}{8}$.

7. Represent the following situation with a signed number.

Diving one hundred and thirty feet below the surface of the ocean.
The corresponding number for this sentence is $\qquad$ .
8. Represent the following situation with a signed number.

A checking account overdrawn by $\$ 17.10$.
The corresponding number for this sentence is $\qquad$ -
9. Add.

$$
-14+17
$$

$-14+17=$ $\qquad$
10. Find the sum.

$$
\begin{gathered}
-3+(-13) \\
-3+(-13)=
\end{gathered}
$$

11. Add.

$$
41+(-56)
$$

$$
41+(-56)=
$$

12. Add.

$$
-16+(-19)
$$

$$
-16+(-19)=
$$

13. Add.

$$
5 \frac{1}{3}+\left(-8 \frac{2}{3}\right)
$$

$5 \frac{1}{3}+\left(-8 \frac{2}{3}\right)=$
(Simplify your answer. Type an integer, proper fraction, or mixed number.)
14. Add.

$$
-4 \frac{4}{5}+3 \frac{9}{10}
$$

$-4 \frac{4}{5}+3 \frac{9}{10}=$
(Simplify your answer. Type an integer, proper fraction, or mixed number.)
15. Add.

$$
-4+1+(-9)
$$

$-4+1+(-9)=$ $\qquad$
16. Add.
$(-2214)+(5871)$
$(-2214)+(5871)=\square$ (Simplify your answer.)
17. In a city the temperature stood at 15 degrees below zero ( $-15^{\circ}$ ) at 2 p.m. Over the next 5 hours the temperature rose 4 degrees, dropped 5 degrees, rose 8 degrees, dropped 2 degrees, and finally dropped 3 degrees. What was the temperature at 7 p.m.?

The temperature at 7 p.m. was $\qquad$ ${ }^{\circ}$.
18. An individual's checking account contained $\$ 378$ on June 1. The individual then made the following transactions. The individual deposited $\$ 160$, withdrew $\$ 225$, withdrew $\$ 34$, deposited $\$ 120$, withdrew $\$ 365$, and deposited $\$ 760$. What was the individual's new balance after these transactions?

The individual's new balance after these transactions is \$ $\qquad$ .
19. Evaluate.

$$
4-5
$$

$$
4-5=
$$

20. Evaluate.

$$
\begin{gathered}
5-(-7) \\
5-(-7)=
\end{gathered}
$$

21. Find the value of the following expression.

$$
\begin{gathered}
-5-(-14) \\
-5-(-14)=
\end{gathered}
$$

$\qquad$
22. Find the value of the following expression.

$$
\begin{gathered}
8-(-4) \\
8-(-4)=
\end{gathered}
$$

23. 

$$
\begin{aligned}
& \text { Subtract. } \\
& -31-20
\end{aligned}
$$

$$
-31-20=
$$

$\qquad$
24. Perform the indicated subtraction.

$$
\frac{3}{13}-\frac{5}{13}
$$

$\frac{3}{13}-\frac{5}{13}=$ $\qquad$ (Type an integer or a simplified fraction.)
25. Find the difference in altitude between a mountain that has an altitude of +3913 feet and a desert valley that has an altitude of -389 feet.

The difference in altitude is $\qquad$ ft.
26. The peak-to-peak voltage of an ac circuit is found by subtracting the negative peak voltage from the positive peak voltage. Calculate the peak-to-peak voltage V in the diagram shown.


The peak-to-peak voltage is $\qquad$ V.
27. Multiply as indicated.

$$
(-5) \times(-13)
$$

What is the product?

$$
(-5) \times(-13)=
$$

$\qquad$ (Simplify your answer.)
28. Divide

$$
-81 \div(-9)
$$

The quotient is $\qquad$ -
29. Multiply as indicated.

$$
\left(-3 \frac{1}{2}\right) \times\left(-2 \frac{7}{8}\right)
$$

What is the product?

$$
\left(-3 \frac{1}{2}\right) \times\left(-2 \frac{7}{8}\right)=
$$

$\qquad$ (Type an integer or a simplified fraction.)
30. Divide as indicated.

$$
(-320) \div(-40)
$$

What is the quotient?

$$
(-320) \div(-40)=
$$

$\qquad$ (Type an integer or a simplified fraction.)
31. Multiply as indicated.

$$
\left(-\frac{3}{8}\right) \times\left(-\frac{4}{15}\right)
$$

What is the product?
$\left(-\frac{3}{8}\right) \times\left(-\frac{4}{15}\right)=$ $\qquad$ (Type an integer or a simplified fraction.)
32. Multiply as indicated.

$$
(-2) \times(-8) \times(-5)
$$

What is the product?

$$
(-2) \times(-8) \times(-5)=
$$

$\qquad$ (Simplify your answer.)
33. Multiply using a calculator and round as indicated.

$$
(-0.036) \times(-0.068)
$$

What is the product?

$$
(-0.036) \times(-0.068)=\frac{\square}{\text { (Type an integer or decimal rounded to four decimal places as needed.) }}
$$

34. An airplane descends from $38,000 \mathrm{ft}$ to $14,000 \mathrm{ft}$ in 12 minutes. Express its rate of change in altitude in feet per minute as a signed number.

What is the rate of change in altitude?
$\qquad$ feet per minute (Simplify your answer. Type an integer or a decimal.)
35. Find the value of the following.
$10^{4}$
$10^{4}=$ $\qquad$ (Simplify your answer.)
36. Evaluate. $2^{5}$
$2^{5}=$ $\qquad$
37. Evaluate.
$7^{3}$
$7^{3}=$ $\qquad$
38. Evaluate.

$$
\begin{aligned}
& 5^{4} \times 2^{2} \\
& 5^{4} \times 2^{2}=\square \text { (Simplify your answer.) }
\end{aligned}
$$

39. Perform the indicated operations by hand. Then use a calculator to check your work.

$$
9+3^{2}
$$

$9+3^{2}=$
40.

Calculate.
$\sqrt{289}$
41.

Calculate.
$\sqrt{361}$
The answer is $\qquad$ .
(Round to two decimal places as needed.)

The answer is $\qquad$ .
(Round to two decimal places as needed.)
42. Calculate.
$\sqrt{812}$
$\sqrt{812} \approx$ $\qquad$ (Round to two decimal places as needed.)
43. Calculate

## $\sqrt{5000}$

$\sqrt{5000} \approx$ $\qquad$ (Round to two decimal places as needed.)
44. Calculate

$$
\sqrt{210}
$$

$\sqrt{210} \approx$ $\qquad$ (Round to two decimal places as needed.)
45. The velocity (in feet per second) of water discharged from a hose with a nozzle pressure of 55 psi is given by $12.14 \sqrt{55}$

Calculate and round to the nearest whole number.

The velocity of water discharged from a hose is approximately $\qquad$ fps.

1. <
2. $>$
3. <
4. (1) >
5. 


6.





## 8. -17.10

9. 3
10. -16
11. -15
12. -35
13. $-3 \frac{1}{3}$
14. $-\frac{9}{10}$
15. -12
16. 3657
17. -13
18. 794
19. -1
20. 12

## 21. 9

## 22. 12

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23. - 51
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24. $-\frac{2}{13}$
25. 4302
26. 400
27. 65
28. 9
29. $10 \frac{1}{16}$
30. 8
31. $\frac{1}{10}$
32. -80
33. 0.0024
34. -2000
35. 10,000
36. 32
37. 343
38. 2,500
39. 18
40. 17
41. 19
42. 28.5
43. 70.71
44. 14.49
45. 90
