**Find the sum of each expression below using the rules for adding integers.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1.** | $$-5+\left(-42\right)=$$ | **2.** | $$175+\left(-142\right)=$$ | **3.** | $$-12+200=$$ |
|  |  |  |  |  |  |
| **4.** | $$-20+(-12)=$$ | **5.** | $$10+65=$$ | **6.** | $$10+(-150)=$$ |
|  |  |  |  |  |  |

**Show the addition on the number line. Then write the sum.**

|  |  |  |
| --- | --- | --- |
| **7.** |  $2+4=$  | **0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
| **8.** | $$\left(-1\right)+\left(-4\right)=$$ | $$ $$$$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
| **9.** | $$6+\left(-3\right)=$$ | $$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |

**Write the expression that each number line demonstrates.** **Then write the sum.**

|  |  |
| --- | --- |
| **10.** | $$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  |  |
| **11.** | $$ $$$$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  |  |
| **12.** | $$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  |  |
| **13.** | $$ $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  |  |

**Solve each expression below.**

|  |  |  |  |
| --- | --- | --- | --- |
| **14.** | $$ \left(-81\right)+\left(-120\right)+55=$$ | **15.** | $$ 167+\left(-11\right)+(-189)=$$ |
|  |  |  |  |
| **16.** | $$ 12+\left(-12\right)+\left[-34+124\right]^{2}=$$ | **17.** | $$ \left[-4+14\right]^{2}+211+\left(-11\right)=$$ |
|  |  |  |  |
| **18.** | $$ -13+145+\left[-66+66\right]^{2}=$$ | **19.** | $$ 1+(-51)+(-113)+\left(-11\right)=$$ |
|  |  |  |  |

**WORD PROBLEMS**

|  |  |
| --- | --- |
| **20.** | An elevator is on the twentieth floor. It goes down 10 floors and then up 6 floors. What floor is the elevator on now? |
|  |  |
| **21.** | At $ 8$ a.m. the temperature was$ -4 °F$ . At noon, the temperature rose$ 10°F$. What was the temperature at noon? |
|  |  |
| **22.** | A submarine is situated $ 400 ft$ below sea level. If it rises $ 100 ft$ , what is its new position? |
|  |  |

**ANSWERS**

**Find the sum of each expression below using the rules for adding integers.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1.** | $$-5+\left(-42\right)=$$ | **2.** | $$175+\left(-142\right)=$$ | **3.** | $$-12+200=$$ |
|  | $$-5+\left(-42\right)=-47$$ |  | $$175+\left(-142\right)=33$$ |  | $$-12+200=188$$ |
| **4.** | $$-20+(-12)=$$ | **5.** | $$10+65=$$ | **6.** | $$10+(-150)=$$ |
|  | $$-20+\left(-12\right)=-32$$ |  | $$10+65=75$$ |  | $$10+\left(-150\right)=-140$$ |

**Show the addition on the number line. Then write the sum.**

|  |  |  |
| --- | --- | --- |
| **7.** |  $2+4=$  | $$ 2 +4$$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6**$$2+4=6$$ |
| **8.** | $$\left(-1\right)+\left(-4\right)=$$ | $$ $$$$ -4 -1$$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6**$$\left(-1\right)+\left(-4\right)=-5$$ |
| **9.** | $$6+\left(-3\right)=$$ | $$ -3 $$$$ +6 $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6**$$6+\left(-3\right)=3$$ |

**Write the expression that each number line demonstrates.** **Then write the sum.**

|  |  |
| --- | --- |
| **10.** | $$+12$$$$ -6$$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  | $$-6+12=6$$ |
| **11.** | $$ $$$$-7$$$$ +4$$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  | $$4+\left(-7\right)=-3$$ |
| **12.** | $$ +3 +3 $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  | $$3+3=6$$ |
| **13.** | $$ -4 -2 $$**0****1****2****3****4** **-1** **-2****-3****-4****5****6** **-5** **-6** |
|  | $$-2+\left(- 4\right)=-6$$ |

**Solve each expression below.**

|  |  |  |  |
| --- | --- | --- | --- |
| **14.** | $$ \left(-81\right)+\left(-120\right)+55=$$ | **15.** | $$ 167+\left(-11\right)+(-189)=$$ |
|  | $$ \left(-81\right)+\left(-120\right)+55=$$$$=-201+55=$$$$=-146$$ |  | $$ 167+\left(-11\right)+\left(-189\right)=$$$$=156+\left(-189\right)=$$$$=-33$$ |
| **16.** | $$ 12+\left(-12\right)+\left[-34+124\right]^{2}=$$ | **17.** | $$ \left[-4+14\right]^{2}+211+\left(-11\right)=$$ |
|  | $$ 12+\left(-12\right)+\left[-34+124\right]^{2}=$$$$=12+\left(-12\right)+\left[90\right]^{2}=$$$$=12+\left(-12\right)+8,100=$$$$=0+8,100=$$$$=8,100$$ |  | $$ \left[-4+14\right]^{2}+211+\left(-11\right)=$$$$=\left[10\right]^{2}+211+\left(-11\right)=$$$$=100+211+\left(-11\right)=$$$$=311+\left(-11\right)=$$$$=300$$ |
| **18.** | $$ -13+145+\left[-66+66\right]^{2}=$$ | **19.** | $$ 1+(-51)+(-113)+\left(-11\right)=$$ |
|  | $$ -13+145+\left[-66+66\right]^{2}=$$$$=-13+145+\left[0\right]^{2}=$$$$=132$$ |  | $$ 1+(-51)+(-113)+\left(-11\right)=$$$$=-50+(-113)+\left(-11\right)=$$$$=(-163)+\left(-11\right)=$$$$=-174$$ |

**WORD PROBLEMS**

|  |  |
| --- | --- |
| **20.** | An elevator is on the twentieth floor. It goes down 10 floors and then up 6 floors. What floor is the elevator on now? |
|  | $….down 10 floors $ $=- 10 $$….up 6 floors $ $=+6$$$ 20+(-10)+6=$$$$=10+6=$$$=16$$16-th floor$ |
| **21.** | At $ 8$ a.m. the temperature was$ -4 °F$ . At noon, the temperature rose$ 10°F$. What was the temperature at noon? |
|  | Temperature in$ 8$ a.m. $–4 °F=-4$$$…. rose 10°F= +10$$$$-4+10=6$$$ $The temperature at noon was$ 6°F$. |
| **22.** | A submarine is situated $ 400 ft$ below sea level. If it rises $ 100 ft$ , what is its new position? |
|  | $….400 ft$ below sea level $=- 400 $$….$ rises $ 100 ft=+100$ $$ -400+100=-300$$The new position is$ 300 ft$ below sea level. |