## Introducing Negative Numbers

Here are the daily low temperatures for one cold week. Fill in the table to show how the temperature changed from one day to the next.
1

|  | Day | Low Temperature | Change From Yesterday |
| :---: | :---: | :---: | :---: |
|  | Sunday | ${ }^{-10}{ }^{\circ} \mathrm{C}$ |  |
|  | Monday | ${ }^{-16}{ }^{\circ} \mathrm{C}$ | 6 degrees lower |
|  | Tuesday | $6^{\circ} \mathrm{C}$ |  |
|  | Wednesday | $13^{\circ} \mathrm{C}$ |  |
|  | Thursday |  | 15 degrees lower |
|  | Friday |  | 9 degrees lower |
|  | Saturday | $-19{ }^{\circ} \mathrm{C}$ |  |

## Test Prep

(2) Which of these figures has 5 faces and 5 vertices?
A.

B.

C.

D.


## Negative Numbers on the Number Line

Fill in the missing numbers on this number line and use it to help you answer the questions.

(1) Start at 0 . Jump forward 6 spaces. Then jump backward 8 spaces.

Where are you? $\qquad$
(3) Start at 10. Jump backward 20 spaces. Then jump forward 6 spaces.

Where are you? $\qquad$
(2) Start at 3. Jump backward 8 spaces. Then jump forward 12 spaces.

Where are you? $\qquad$
(4) Start at ${ }^{-3}$. Jump backward 6 spaces. Then jump forward 2 spaces.

Where are you? $\qquad$

## Test Prep

(5) What decimal is equal to $\frac{52}{100}$ ?
A. 0.0052
B. 0.052
C. 0.52
D. 52
(6) What fraction is equal to 0.25 ?
A. $\frac{1}{4}$
B. $\frac{1}{3}$
C. $\frac{1}{2}$
D. $\frac{2}{5}$
$\qquad$

## Navigating on a Coordinate Grid

(1) Write the ordered pair for each building on the map.


(2) The Community Center is at $(-3,5)$. Mark its location with a star.

## Test Prep

(3) Caitlin boiled water for a science experiment. This thermometer shows the water's temperature when it was boiling. She checked it 10 minutes later and found the water's temperature had dropped by $23^{\circ} \mathrm{C}$. What was the new temperature?
A. $67^{\circ} \mathrm{C}$
B. $73^{\circ} \mathrm{C}$
C. $77^{\circ} \mathrm{C}$
D. $87^{\circ} \mathrm{C}$


## Points and Lines on a Grid

(1) Fill in the missing numbers on the number line. You can use the number line to help answer the questions.

(2) At 7:00 A.M. on Sunday, the temperature was $4^{\circ}$. At 9:00 P.M., the thermometer read $-2^{\circ}$. What was the change in temperature between these two times?
(3) Sean placed his finger at -5 on the number line. He jumped forward 6 spaces and then back 1 space.
Where did his finger land?
(4) Write the coordinate pair for each building on the map.


$$
\begin{aligned}
& \text { Police Station }(-4,3) \\
& \text { School (____) } \\
& \text { Bank (___) } \\
& \text { Post Office }(\square
\end{aligned}
$$

## Test Prep

(5) Miri opened a bottle containing 1 liter of juice. She shared the juice equally with her sister Jordyn. How many milliliters of juice did they each get? Explain how you found the answer.
$\qquad$
$\qquad$

## Drawing Figures on a Coordinate Grid

(1) Follow the directions to draw the picture.


Mark $\boldsymbol{A}$ at $(-1,1)$.
Mark B at $(2,1)$.
Mark C at $(2,-2)$.
Mark $D$ at $(1,-1)$.
Mark $E$ at $(-1,-3)$.
Mark F at (-2,-2).
Mark $G$ at $(0,0)$.

Draw $\overline{\boldsymbol{A B}}$.
Draw $\overline{B C}$.
Draw $\overline{\mathbf{C D}}$.
Draw $\overline{D E}$. What shape do you see?
Draw $\overline{\boldsymbol{E F}}$.
Draw $\overline{\boldsymbol{F G}}$.
Draw $\overline{\mathbf{G A}}$.

## Test Prep

2. Antonio is drawing a square on the grid. What is the ordered pair for the fourth corner of the square? Explain how you found the coordinates.

## Moving Figures on a Coordinate Grid

Use the grid to draw the figures for items 1-3.
(1) Follow the directions to draw the figure.

| Mark $\boldsymbol{A}$ at $(8,5)$. | Draw $\overline{\boldsymbol{A B}}$. |
| :--- | :--- |
| Mark $\boldsymbol{B}$ at $(5,5)$. | Draw $\overline{\boldsymbol{B C} .}$ |
| Mark $\boldsymbol{C}$ at $(3,3)$. | Draw $\overline{\boldsymbol{C D} .}$ |
| Mark $\boldsymbol{D}$ at $(6,3)$. | Draw $\overline{\boldsymbol{D A} .}$ |


(2) Subtract 3 from both coordinates of each point, and label the new figure \#2.

| Original <br> Points | New <br> Points |
| :---: | :---: |
| $(8,5)$ | $(5,2)$ |
| $(5,5)$ |  |
| $(3,3)$ |  |
| $(6,3)$ |  |

(3) Add 3 to the vertical (second) coordinate of each point, and label the new figure \#3.

| Original <br> Points | New <br> Points |
| :---: | :---: |
| $(8,5)$ | $(8,8)$ |
| $(5,5)$ |  |
| $(3,3)$ |  |
| $(6,3)$ |  |

## Test Prep

(4) Mr. Macus needs to visit the Bank, the Library, and the Post Office tomorrow. Here are some of the possible orders he might visit them.

1. Bank
2. Library
3. Bank
4. Post Office
5. Post Office
6. Library
7. Library
8. Bank
9. Post Office

List all of the other possible orders he might follow.

## Number Sentences and Straight Lines

(1) Find at least 5 pairs of numbers that make this number sentence true: $y=x-2$.

| $(x, y)$ |
| :--- |
|  |
|  |
|  |
|  |
|  |


2) Graph the points described by the pairs of numbers in the table.

## Test Prep

(3) Jamal started his homework at 2:55 P.M. He finished one hour and fifty minutes later. When did he finish his homework?
A. 3:45 P.M.
C. 4:45 P.M.
B. 4 P.M.
D. 5:05 P.M.
(4) Which number sentence is true if you substitute 11 for ${ }^{\text {■ }}$ ?
A. $111 \div \square=11$
B. $121 \div \square=12$
C. $132 \div \square=12$
D. $110 \div \square=11$

