## Summer in the Northern Hemisphere

Summer is one of the four seasons. The seasons are caused by the Earth's movement around the Sun. As the Earth is tilted, the amount of sunlight each part of the planet gets changes slightly throughout the year. In the summer, the sun's rays hit that part of the earth more directly than at other times of the year, therefore making the area warmer.

## Use the grids to answer the questions on the following page.

Grid 1


Grid 2


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Solve each question below. Then use the key to find the answer to the joke. Letters can be used more than once.

1. Grid 2 : If the triangle was translated 2 RIGHT and 4 DOWN, what would the new coordinates for point X be?
2. Grid 2: What are the coordinates of the apex of the triangle?
3. Grid 1 : What are the coordinates for point F?
4. Grid 1: If point A was translated 10 DOWN, what would point A's new coordinates be?
5. Grid 1: If point E was translated 5 LEFT and 2 UP, what would point E's new coordinates be?
6. Grid 1: If a new point, G, was plotted exactly 3 squares DOWN below C , what would G's coordinates be?
7. Grid 1: If point B, point C and $(9,9)$ are 3 points to form a square, which coordinates will make the fourth point?
8. Grid 2: If the rectangle was translated 5 RIGHT, what would the new coordinates for point Y be?
9. Grid 1: If point $D$ and $F$ are 2 points of an isosceles triangle, which coordinates will make the third point? (4, __)
10. Grid 1: If point $D$, point $F$ and $(2,2)$ are 3 points to form a rectangle, which coordinates will make the fourth point?
11. Grid 1: What are the coordinates for point A?
12. Grid 2: Translate the triangle 4 LEFT and 7 DOWN. What are the new coordinates for the apex (top) of the triangle?

## Did you know?

The Roman Marc Antony named the month of July in honor of Julius Caesar.
10. Grid 2: What are the coordinates for point Z?
13. Grid 2 : If the rectangle was translated 2 RIGHT and 6 DOWN, what would the new coordinates for point $Y$ be?

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ | $\mathbf{F}$ | $\mathbf{G}$ | $\mathbf{H}$ | $\mathbf{I}$ | $\mathbf{J}$ | $\mathbf{K}$ | $\mathbf{L}$ | $\mathbf{M}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $(8,8)$ | $(7,9)$ | $(9,7)$ | $(2,0)$ | $(6,7)$ | $(4,1)$ | $(4,0)$ | $(7,4)$ | $(4,2)$ | $(1,5)$ | $(5,3)$ | $(6,10)$ | $(8,9)$ |
| $\mathbf{N}$ | $\mathbf{O}$ | $\mathbf{P}$ | $\mathbf{Q}$ | $\mathbf{R}$ | $\mathbf{S}$ | $\mathbf{T}$ | $\mathbf{U}$ | $\mathbf{V}$ | $\mathbf{W}$ | $\mathbf{X}$ | $\mathbf{Y}$ | $\mathbf{Z}$ |
| $(4,10)$ | $(6,6)$ | $(10,1)$ | $(3,6)$ | $(1,10)$ | $(9,4)$ | $(4,6)$ | $(2,6)$ | $(0,2)$ | $(7,7)$ | $(5,9)$ | $(9,5)$ | $(4,4)$ |

## What do you get when you combine an elephant with a fish?

$$
\overline{1} \overline{2} \overline{3} \overline{4} \overline{5} \overline{6} \overline{7} \overline{8} \quad \overline{9} \overline{10} \overline{11} \overline{12} \overline{13} \overline{14}
$$

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1. Grid 2: If the triangle was translated 2 RIGHT and 4 DOWN, what would the new coordinates for point $X$ be?
$(9,4)$ S
2. Grid 1: If point $B$, point $C$ and $(9,9)$ are 3 points to form a square, which coordinates will make the fourth point?
$(7,7)$ W
3. Grid 2: Translate the triangle 4 LEFT and 7 DOWN. What are the new coordinates for the apex (top) of the triangle?
$(4,2)$
$(8,9)$
M
4. Grid 2: What are the coordinates of the apex of the triangle?
$(8,9) \quad M$ coordinates for point $Y$ be?
5. Grid 1: What are the coordinates for point F?
6. Grid 1: If point $D$ and $F$ are 2 points of an isosceles triangle, which coordinates will make the third point? $(4, \ldots)$

N
8. Grid 1: If point A was translated 10 DOWN, what would point A's new coordinates be?
$(4,0)$
G
9. Grid 1: If point $D$, point $F$ and $(2,2)$ are 3 points to form a rectangle, which coordinates will make the fourth point?
$(4,6)$
T
10. Grid 2: What are the coordinates for point $Z$ ?
$(1,10)$
R
11. Grid 1: If point E was translated 5 LEFT and 2 UP, what would point E's new coordinates be?

U
12. Grid 1: What are the coordinates for point $A$ ?
13. Grid 2: If the rectangle was translated 2 RIGHT and 6 DOWN, what would the new coordinates for point $Y$ be?

K
14. Grid 1: If a new point, $G$, was plotted exactly 3 squares DOWN below $C$, what would G's coordinates be?
$(9,4)$
S

## What do you get when you combine an elephant with a fish?

## Swimming trunks.

