

2. Find the $35^{\circ}28'50'' - 25^{\circ}20'21''$

$$\begin{array}{r} 35^{\circ} 28' 50'' \\ - 25^{\circ} 20' 21'' \\ \hline 10^{\circ} 08' 29'' \end{array}$$

Didn't have to borrow, but you might have to on the test!

3. Convert 27.34° into dms.

$$\begin{array}{l} 0.34(60) \\ 27^{\circ} 20.4' \\ \quad (.4)(60) = 24 \\ \hline \boxed{27^{\circ} 20' 24''} \end{array}$$

4. Convert $53^{\circ}36'25''$ into decimal degrees.

$$\begin{array}{l} 25/60 = .417 \\ 36.417 / 60 = .61 \\ \hline \boxed{53.61^{\circ}} \end{array}$$

5. $m\angle A = 3x$. Given that $\angle A$ is obtuse, what are the restrictions on x ?

$$\begin{array}{l} 90 < 3x < 180 \\ \text{Solve both} \\ 30 < x < 60 \end{array}$$

$$\boxed{50 < 30 < x < 60}$$

6. $m\angle P = 2x - 6$. If $\angle P$ is acute, what are the restrictions on x ?

$$\begin{array}{l} 0 < 2x - 6 < 90 \\ \text{Solve both} \\ 6 < 2x \\ 3 < x \end{array}$$

$$\boxed{50 < 3 < x < 48}$$

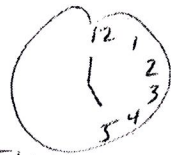
7. If $\angle J = 5a + 32$, what value of a would allow us to conclude that $\angle J$ is a right angle?

$$\begin{array}{r} 5a + 32 = 90 \\ - 32 \quad - 32 \\ \hline 5a = 58 \end{array}$$

$$\frac{5a}{5} = \frac{58}{5}$$

$$\boxed{a = 11.6}$$

8. What's the measure of the angle formed by the hands of a clock at 5:00?



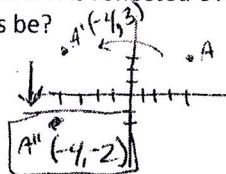
$$5 \cdot 30 = 150^{\circ}$$



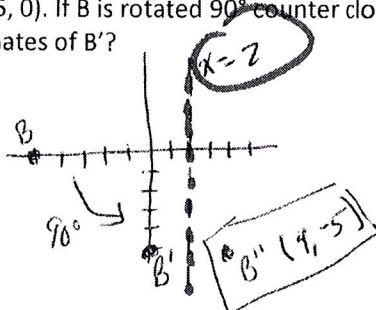
At 5:30 15°

less than 30°

9. Point A is at $(4, 3)$ on the xy plane. If A is reflected over the y axis, then translated 5 units down, what would the new coordinates be?



10. Point B is at the coordinates $(-5, 0)$. If B is rotated 90° counter clockwise, then reflected in the line $x = 2$, what are the coordinates of B' ?



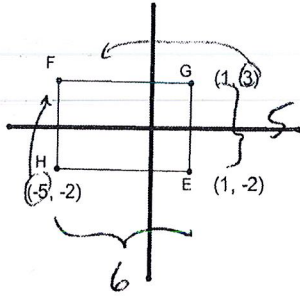
11. A rectangle is graphed below (all angles are 90°)

What are the coordinates of F?

$(-5, 3)$

What's the area of the rectangle?

$$5 \times 6 = 30 \text{ units}^2$$



What's the perimeter?

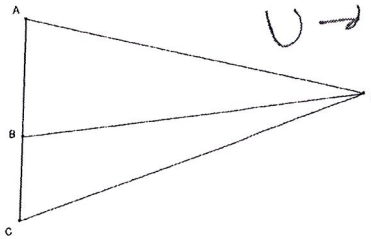
$$5 + 6 + 5 + 6 = 22 \text{ units}$$

Use the diagram below to answer questions 12 – 15.

Don't mess up the symbols !!

\cap → intersect/overlap
 \cup → whole thing/union

12. $\overline{AB} \cap \overline{BD} = \underline{B}$
 13. $\overline{AB} \cup \overline{AD} = \underline{\triangle BAD}$
 14. $\overline{AC} \cap \overline{CA} = \underline{\overline{AC}}$
 15. $\overline{AC} \cup \overline{CA} = \underline{\overline{AC}}$



14. "If it's not a duck, then it dances" Write the converse, inverse, and contrapositive:

Conv: If it dances, then it's not a duck

Inv: If it's a duck, then it does not dance

Contr: If it does not dance, then it's a duck.

15. If an original statement is true, then contrapositive must be true.

16. Assume the following are true statements, use syllogism to write a valid conclusion.

If I listen to Drake, then I might lose intelligence.

If I lose intelligence, I'll start liking Drake.

If I like Drake, then adults will make fun of me.

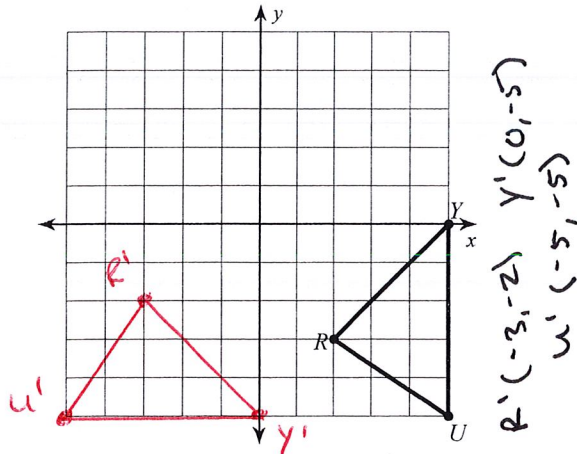
If I listen to Drake, then adults will make fun of me.

17. Name a counterexample that would show the statement, "If it's a Fararri, then it's red" to be false.

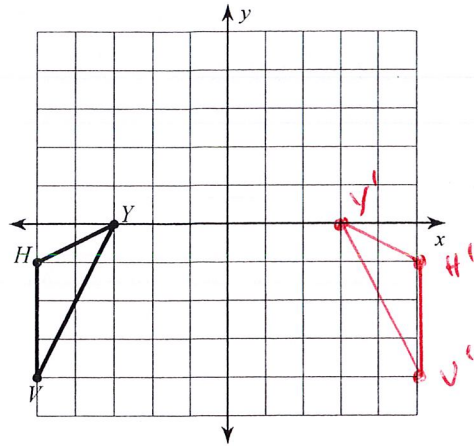
A green Fararri... any Fararri that isn't red.

Graph the image of the figure using the transformation given.

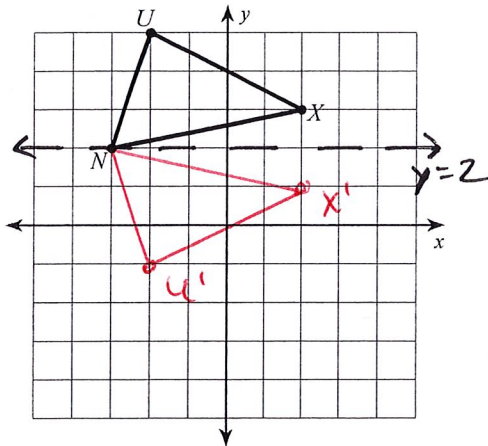
16) rotation 90° clockwise about the origin



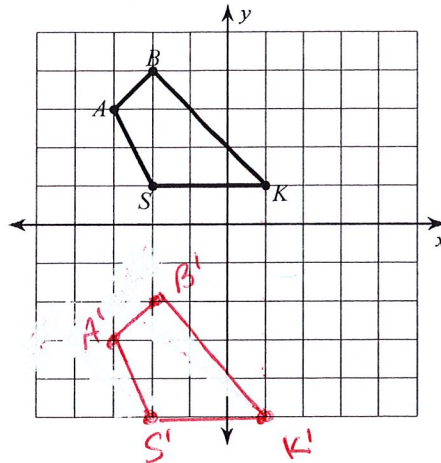
17) reflection across the y-axis



18) reflection across $y = 2$



19) translation: $(x, y) \rightarrow (x, y - 6)$

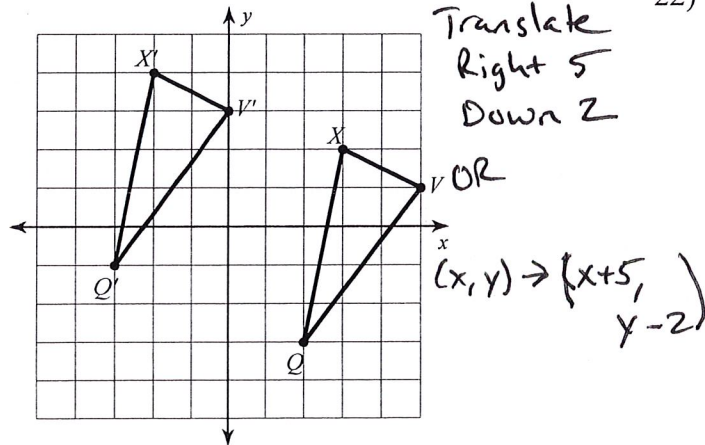


Find the coordinates of the vertices of each figure after the given transformation.

20) translation: $(x, y) \rightarrow (x + 4, y - 5)$ $H'(-1, -4)$ $M(-1, -1)$ $P(0, -3)$
 $H(-5, 1)$, $M(-5, 4)$, $P(-4, 2)$

Write a rule to describe each transformation.

21)



22)

