Honors CCGPS Analytic Geometry
Review – Basics of Geometry Unit 1

Name Huff

2. Find the sum, 25°28′50″ + 25°20′21″

25 20 21
50 49 71 more than a min so roll a min over

$\boxed{50^\circ\ 50'\ 11''}$

3. Convert 27.34° into dms.

.34(60)
27° 20.4′

(.4)(60) = 24

$\boxed{27^\circ\ 20'\ 24''}$

4. Convert 53°36′25″ into decimal degrees.

25/60 = .417
36.417 / 60 = .61

$\boxed{53.61^\circ}$

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

$90 < 3x < 180$
Solve both

$90 < 3x$ $\quad$ $3x < 180$
$30 < x$ $\quad$ $x < 60$

$\boxed{\text{So } 30 < x < 60}$

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

$0 < 2x - 6 < 90$
Solve both

$0 < 2x - 6$ $\quad$ $2x - 6 < 90$
$6 < 2x$ $\quad$ $2x < 96$
$3 < x$ $\quad$ $x < 48$

$\boxed{\text{So } 3 < x < 48}$

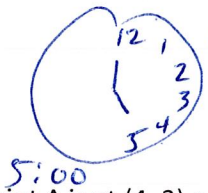
7. If ∠J = 5a + 32, what value of a would allow us to conclude that ∠J is a right angle?

$5a + 32 = 90$
$-32 \quad -32$
$5a = 58$

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

$\boxed{a = 11.6}$

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



5:00

5 · 30 = 150°

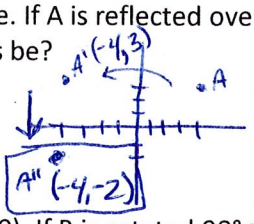
150°

At 5:30?

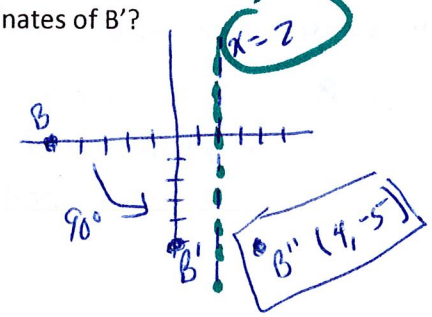
less than 30°

15°

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?

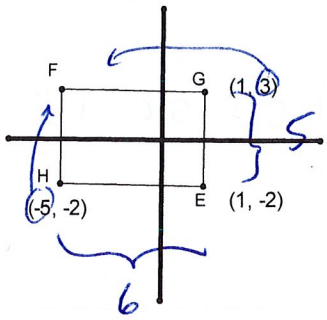


10. Point B is at the coordinates (-5, 0). If B is rotated 90° counter clockwise, then reflected in the line x = 2, what are the coordinates of B′?



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?

$5 \times 6 = 30$ units^2

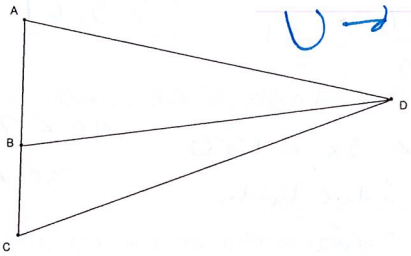
What's the perimeter?

$5 + 6 + 5 + 6 = 22$ units

Use the diagram below to answer questions 12 – 15.

$\cap \rightarrow$ intersect/overlap

$\cup \rightarrow$ whole thing/union



12. $\overline{AB} \cap \overline{BD} =$ B

13. $\overline{AB} \cup \overline{AD} =$ ∡BAD

14. $\overrightarrow{AC} \cap \overrightarrow{CA} =$ $\overline{AC}$

15. $\overrightarrow{AC} \cup \overrightarrow{CA} =$ $\overleftrightarrow{AC}$

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 its 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 inteligence.
If I lose inteligence, I'll start liking Drake.
If I like Drake, then adults will make fun of me.

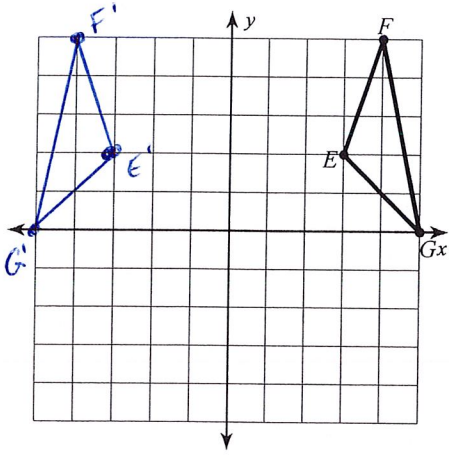
If I listen to Drake, then adults will make fun of me.

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

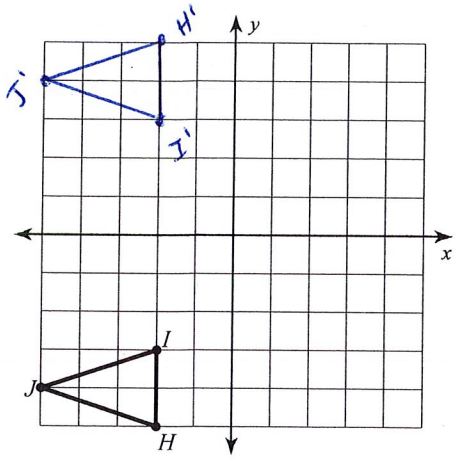
A green Fararri... any Fararri that isn't red.

Graph the image of the figure using the transformation given.

18) reflection across the y-axis

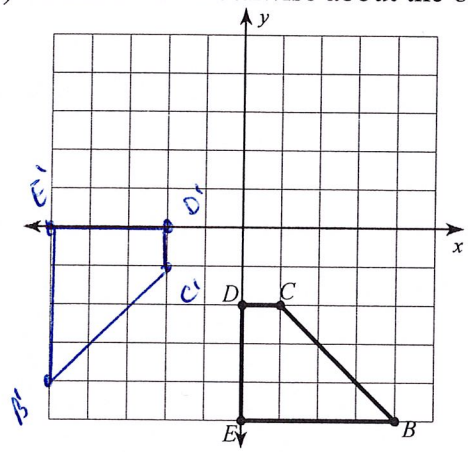


19) reflection across the x-axis

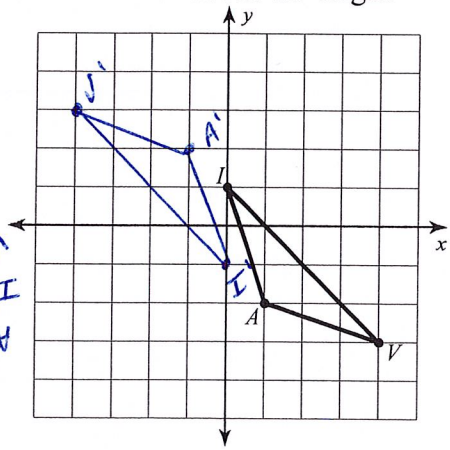


Find the coordinates of the vertices of each figure after the given transformation.

20) rotation 90° clockwise about the origin



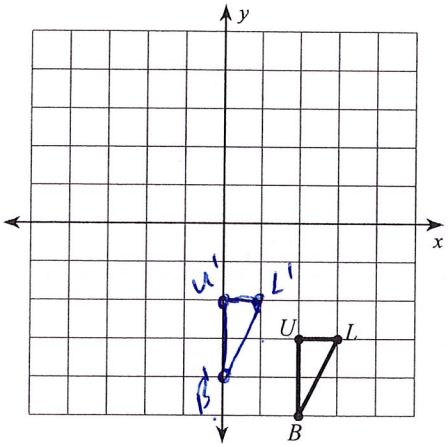
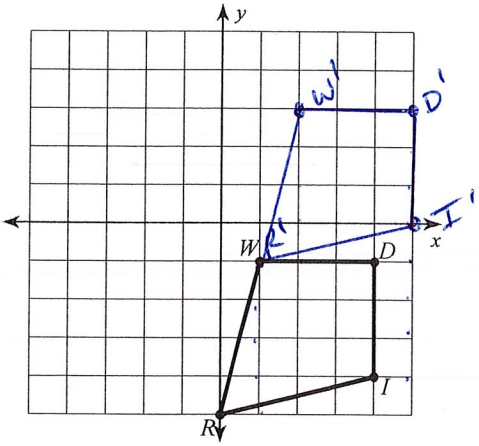
21) rotation 180° about the origin



(2, -1), A'
(1, -0), I'
(-2, -3), J'

Graph the image of the figure using the transformation given.

22) translation: $(x, y) \rightarrow (x - 2, y + 1)$



23) translation: $(x, y) \rightarrow (x + 1, y + 4)$