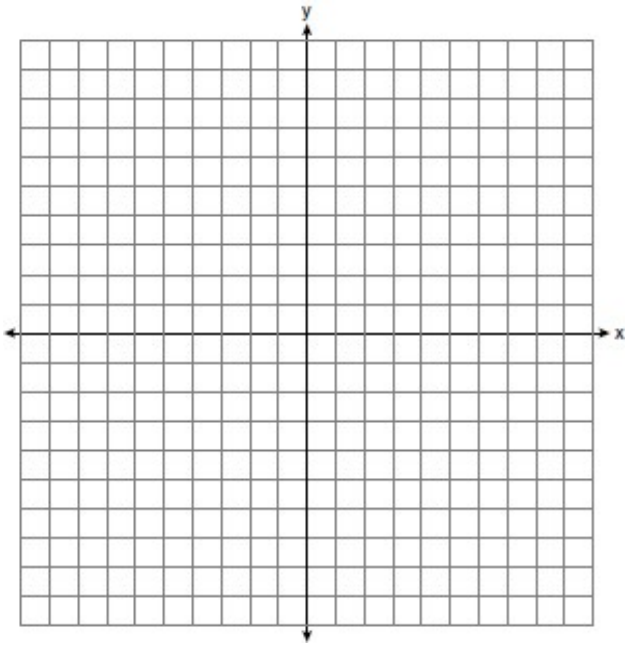
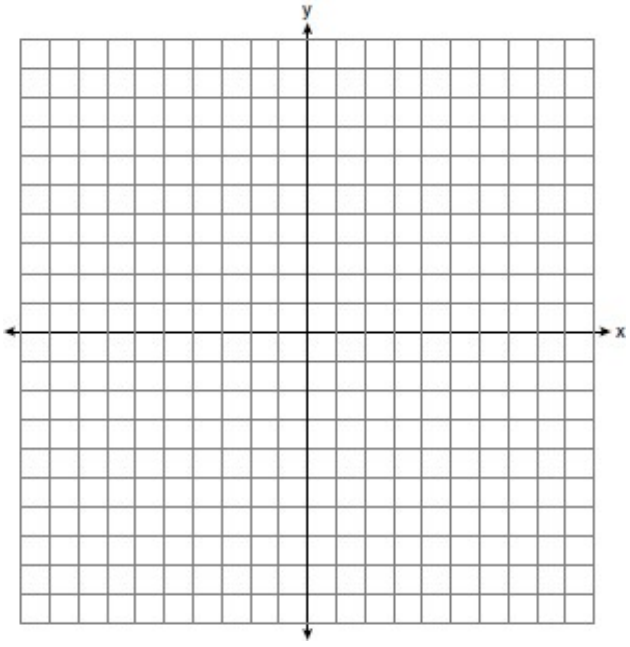
Name _____ Date _____
Mr. Schlansky Geometry

Area with Coordinate Geometry

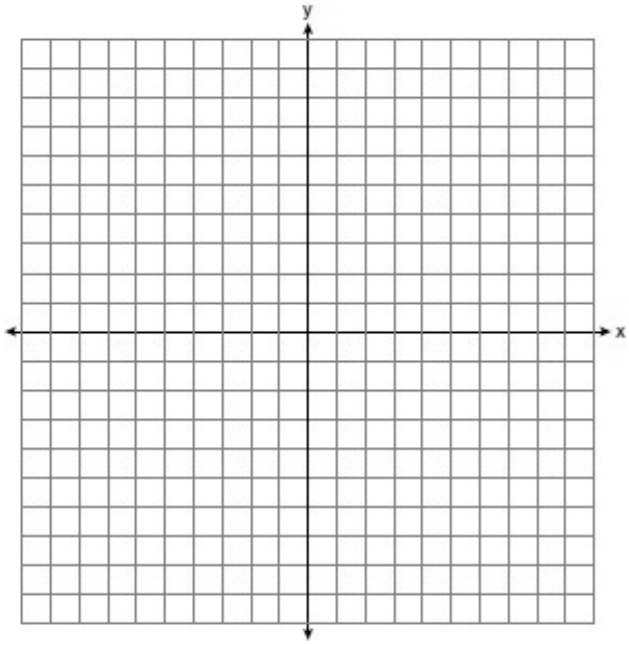
1. Triangle JOY has vertices J(4,0), O(5,4) and Y(1,5).
Find the area of triangle JOY.



2. Triangle USA has vertices U(4,-7), S(-3,-4), and A(7,0).
Find the perimeter of triangle USA.



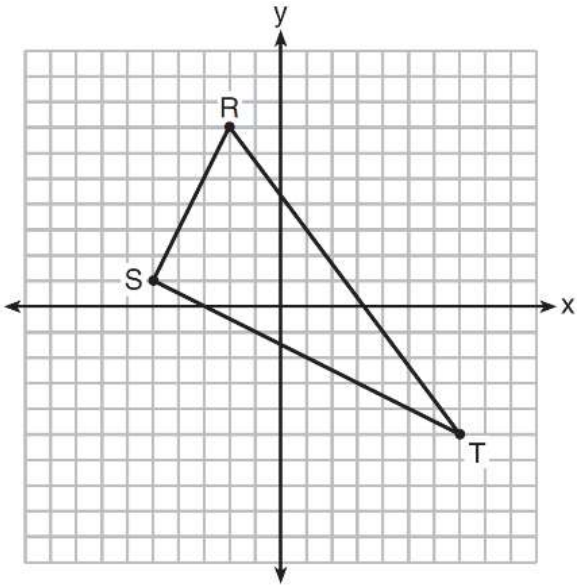
3. Find the area of triangle ABC if A(0,2), B(2,3), and C(1,5).



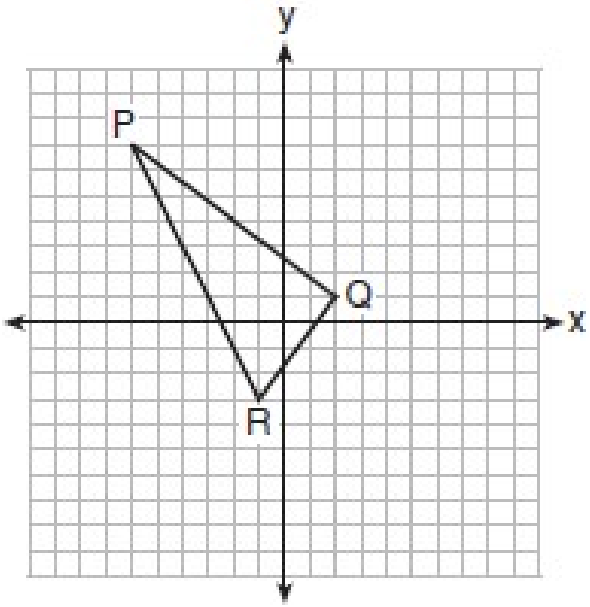
4. Triangle *RST* is graphed on the set of axes below.

How many square units are in the area of $\triangle RST$?

1) $9\sqrt{3}+15$
2) $9\sqrt{5}+15$
3) 45
4) 90



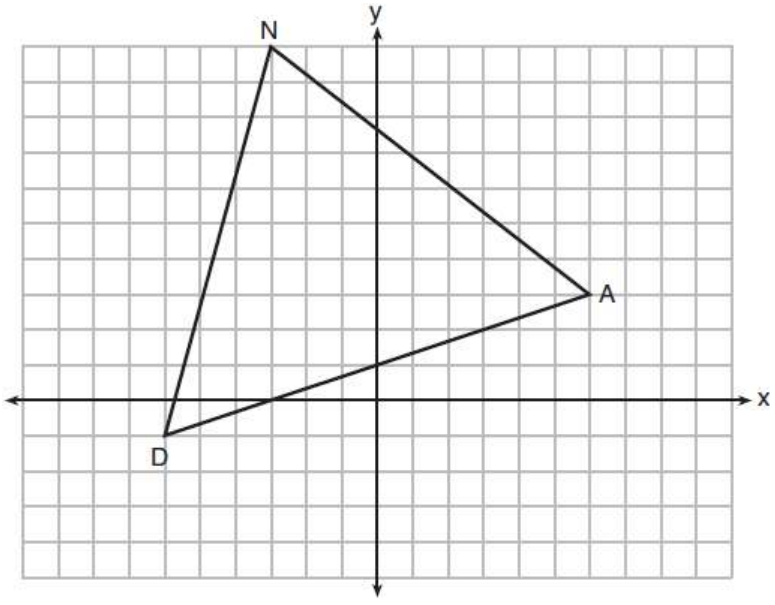
5. On the set of axes below, the vertices of $\triangle PQR$ have coordinates $P(-6,7)$, $Q(2,1)$, and $R(-1,-3)$.



What is the area of $\triangle PQR$?

1) 10
2) 20
3) 25
4) 50

6. Triangle DAN is graphed on the set of axes below. The vertices of $\triangle DAN$ have coordinates $D(-6,-1)$, $A(6,3)$, and $N(-3,10)$.

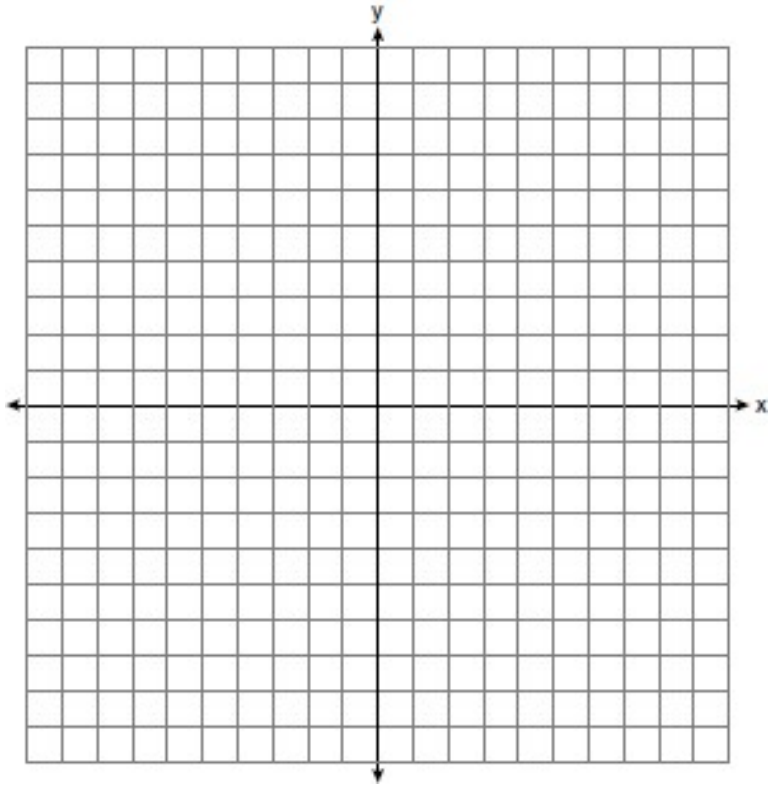


What is the area of $\triangle DAN$?

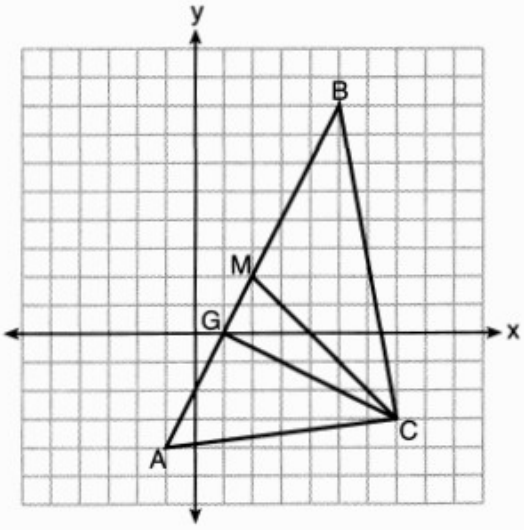
1) 60
2) 120
3) $20\sqrt{13}$
4) $40\sqrt{13}$

7. The coordinates of vertices A and B of $\triangle ABC$ are $A(3,4)$ and $B(3,12)$. If the area of $\triangle ABC$ is 24 square units, what could be the coordinates of point C?

1) $(3,6)$
2) $(8,-3)$
3) $(-3,8)$
4) $(6,3)$



8. On the set of axes below, $\triangle ABC$, altitude $\overline{CG}$, and median $\overline{CM}$ are drawn.



Which expression represents the area of $\triangle ABC$?

(1) $\frac{(BC)(AC)}{2}$

(2) $\frac{(GC)(BC)}{2}$

(3) $\frac{(CM)(AB)}{2}$

(4) $\frac{(GC)(AB)}{2}$