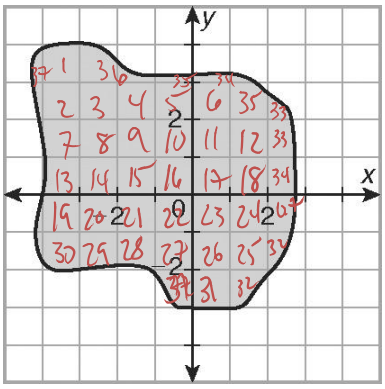
10.4 Homework Worksheet Name Solutions

- ❒ 10.3.b: Use composite figures to estimate the areas of irregular shapes.
- ❒ 10.4: Find the perimeters and areas of figures in the coordinate plane.

Perimeter and Area in the Coordinate Plane

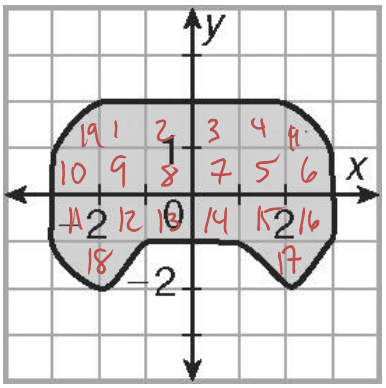
1) The diagram represents train tracks in the children's area of a zoo. Estimate the area enclosed by the tracks. The side length of each square represents 1 meter. (10.3.b)



$\approx 37.7\ m^2$

(Any # 37 – 38 would be fine)

2) You want to estimate the area of the pool at your local park district. Estimate the area of the pool if each square represents 1 yd^2. (10.3.b)

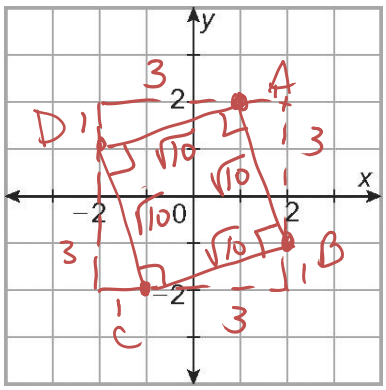


$\approx 19\ yd^2$

(Any # between 18.5 – 19.5 is good)

(3-5) Find the perimeter and area of each polygon. **Show all of your work!!!** (10.4)

3) A(1, 2) B(2, -1) C(-1, -2), and D(-2, 1)



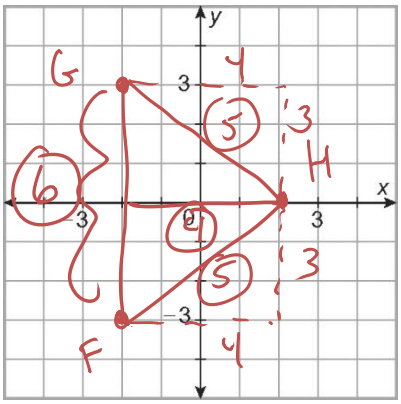
m of $AB = \frac{3}{-1} = -3$
m of $BC = \frac{1}{3}$ } ⊥
m of $CD = \frac{-3}{1} = -3$
m of $AD = \frac{1}{3}$ } ⊥

Square!!

$P = 4\sqrt{10}\ u$

$A = \sqrt{10} \cdot \sqrt{10} = 10\ u^2$

4) F (-2, -3), G (-2, 3), H (2, 0)

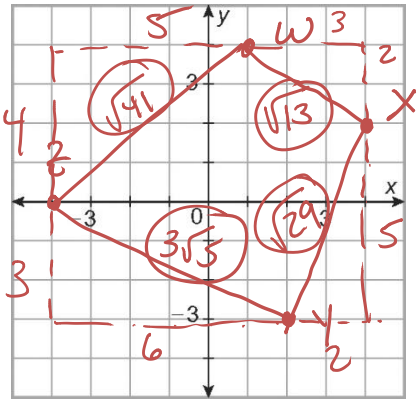


Triangle!

$A = \frac{6 \cdot 4}{2} = 12\ u^2$

$P = 2(5) + 6 = 16\ u$

5) W(1, 4), X (4, 2), Y(2, -3), Z (-4, 0)



Quadrilateral!

m of $WX = \frac{2}{-3}$
m of $XY = \frac{5}{2}$
m of $YZ = \frac{-3}{6} = -\frac{1}{2}$
m of $WZ = \frac{4}{5}$

$P = \sqrt{41} + \sqrt{13} + \sqrt{29} + 3\sqrt{5}\ u$ (16 + 25)

$A_{rect} = 8(7) = 56$
$A_{\Delta 1} = \frac{4 \cdot 5}{2} = 10$
$A_{\Delta 2} = \frac{3 \cdot 2}{2} = 3$
$A_{\Delta 3} = \frac{2 \cdot 5}{2} = 5$
$A_{\Delta 4} = \frac{6 \cdot 3}{2} = 9$ } 27

$A = 56 - 27 = 29\ u^2$