Name _Schlansky_
Mr. Schlansky

Date _____
Geometry

Partitions

1. What are the coordinates of the point on the directed line segment from $K(-5,-4)$ to $L(5,1)$ that partitions the segment into a ratio of 3 to 2?
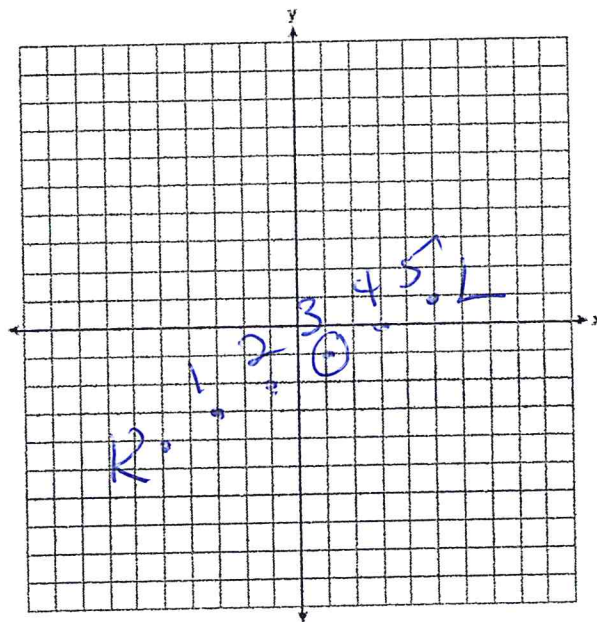1) $(-3,-3)$
2) $(-1,-2)$
3) $\left(0,-\frac{3}{2}\right)$
4) $(1,-1)$

$(1,-1)$

$\dfrac{\Delta x}{P}$ $\dfrac{\Delta y}{P}$

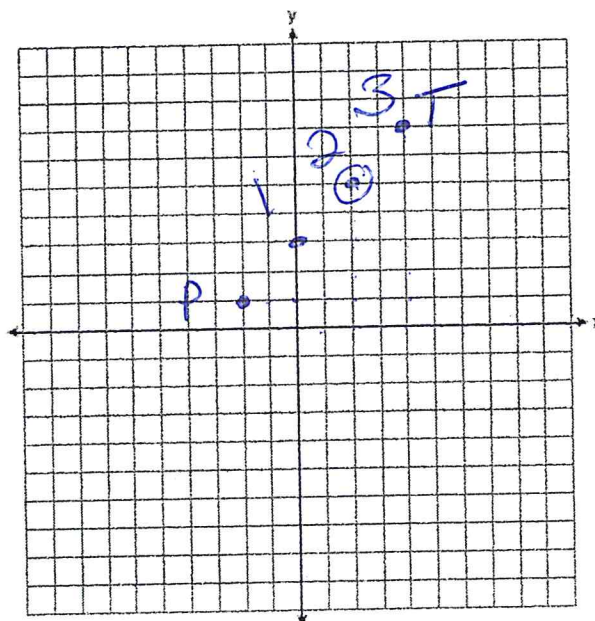$\dfrac{10}{5}$ $\dfrac{5}{5}$

2 1

2. Directed line segment PT has endpoints whose coordinates are $P(-2,1)$ and $T(4,7)$. Determine the coordinates of point J that divides the segment in the ratio 2 to 1.

$\dfrac{\Delta x}{P}$ $\dfrac{\Delta y}{P}$

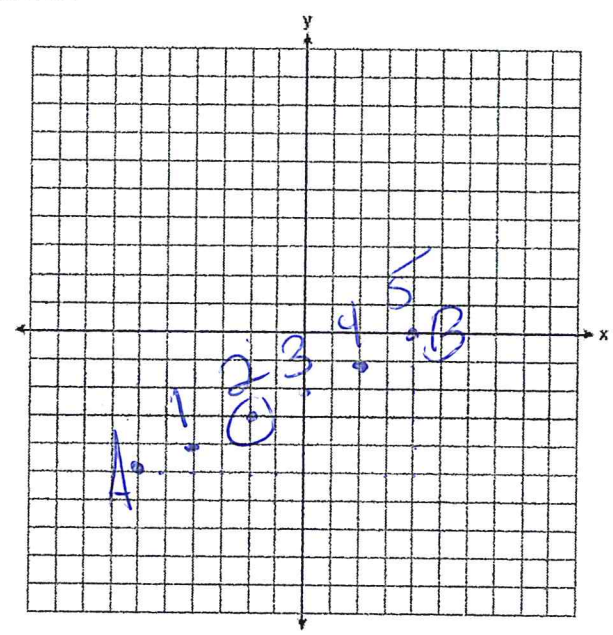$\dfrac{6}{3}$ $\dfrac{6}{3}$

2 2

$(2,5)$

3. The coordinates of the endpoints of $\overline{AB}$ are $A(-6,-5)$ and $B(4,0)$. Point P is on $\overline{AB}$. Determine and state the coordinates of point P, such that $AP:PB$ is $2:3$.

$\dfrac{\Delta x}{P}$ $\dfrac{\Delta y}{P}$

$\dfrac{10}{5}$ $\dfrac{5}{5}$

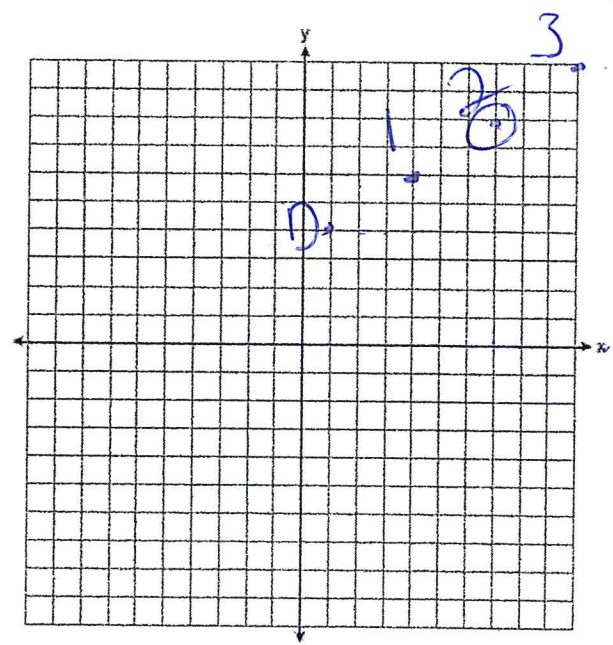2 1

$(-2,-3)$

4. The endpoints of $\overline{DEF}$ are $D(1,4)$ and $F(16,14)$. Determine and state the coordinates of point E, if $DE:EF = 2:3$.

$\dfrac{\Delta x}{P}$ $\dfrac{\Delta y}{D}$

$\dfrac{15}{5}$ $\dfrac{10}{5}$
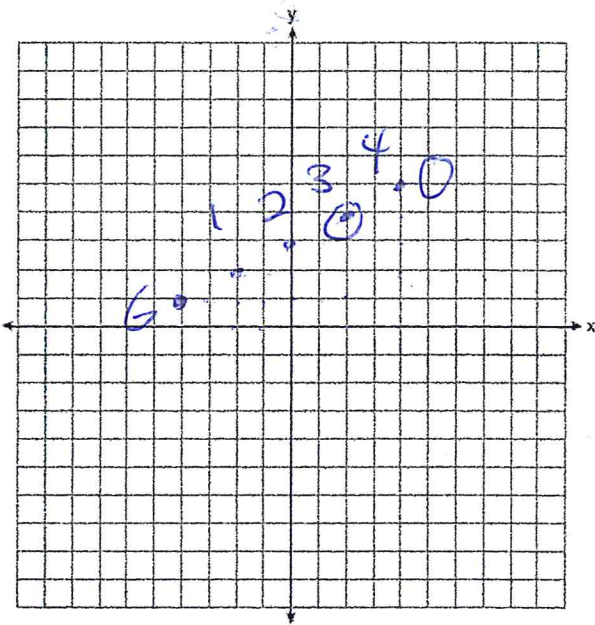
3 2

$(7,8)$

5. What are the coordinates of the point on the directed line segment from $G(-4,1)$ to $O(4,5)$ that partitions the segment into a ratio of 3 to 1?

$$\frac{\Delta x}{P}$$

$$\frac{8}{4}$$

$$2$$

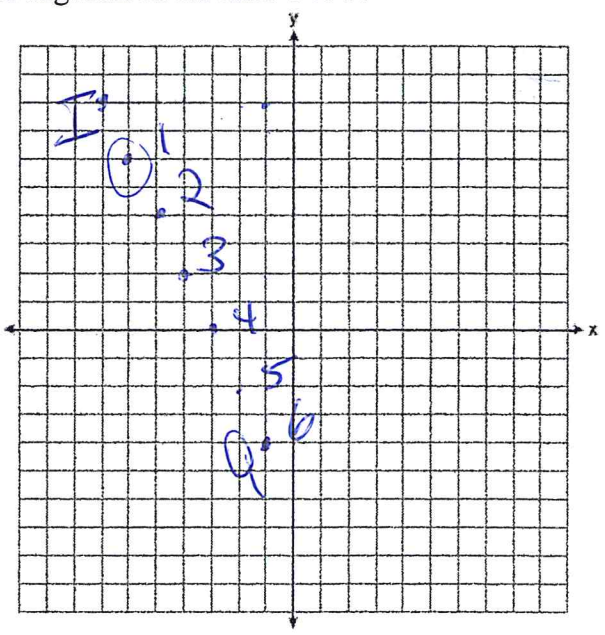$$\frac{\Delta y}{P}$$

$$\frac{4}{4}$$

$$1$$

$$(2,4)$$

6. Directed line segment IQ has endpoints whose coordinates are $I(-7,8)$ and $Q(-1,-4)$. Determine the coordinates of point J that divides the segment in the ratio 1 to 5.

$$\frac{\Delta x}{P}$$

$$\frac{6}{6}$$

$$1$$

$$\frac{\Delta y}{P}$$
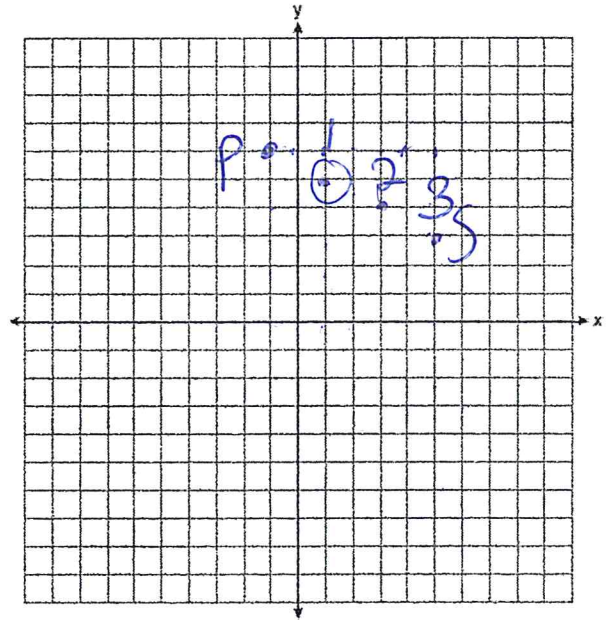
$$\frac{12}{6}$$

$$-2$$

$$(-6,6)$$

7. What are the coordinates of the point on the directed line segment from $P(-1,6)$ to $S(5,3)$ that partitions the segment into a ratio of 1 to 2?

$\frac{\Delta x}{P}$ $\frac{\Delta y}{P}$

$\frac{6}{3}$ $\frac{-3}{3}$

2 -1

$(1,5)$

8. Directed line segment JQ has endpoints whose coordinates are $J(8,6)$ and $Q(-10,-3)$.
Determine the coordinates of point O that divides the segment in the ratio 5 to 4.

$\frac{\Delta x}{P}$ $\frac{\Delta y}{P}$

$\frac{-18}{9}$ $\frac{-9}{9}$

-2 -1

$(-2,1)$