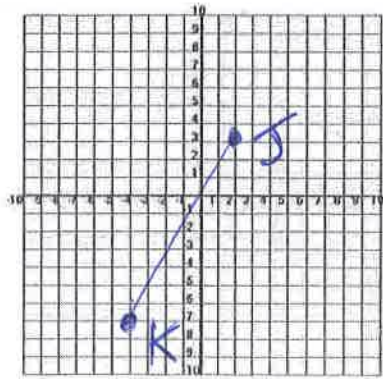


LINEAR CHARACTERISTICS PRACTICE TEST

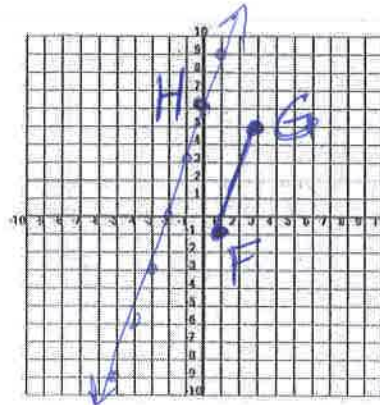
NAME Answer Key

1. Plot the line segment with the following endpoints:
 $J(2,3), K(-4,-7)$



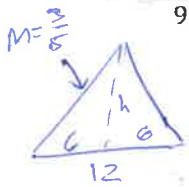
2. What is the slope of the line segment above?
 $\frac{\text{rise}}{\text{run}} = \frac{-10}{-6} = \frac{5}{3}$
3. What are the coordinates of two other points on the line?
 $(-1, -2) \quad (5, 8)$
4. What is the slope of a line perpendicular to JK?
 $m = -\frac{3}{5}$

5. Plot the line segment FG with endpoints at $F(1, -1)$ and a midpoint at $G(3, 5)$.



6. What is the slope of the line segment above?
 $\frac{\text{rise}}{\text{run}} = \frac{6}{2} = 3$
7. What is the slope of a line parallel to FG .
 $m = 3$ *same slope*
8. Plot a parallel line through $H(0, 6)$
see graph

9. The peaked roof on a hut has a pitch of $\frac{3}{5}$. If the roof has a total span of 12m, how tall is the roof?



$$\frac{3}{5} = \frac{h}{6} \quad \boxed{h = \frac{18}{5} = 3.6}$$

10. Find the x-intercept and y-intercept of a line that has the equation $2x + 3y = 18$.

x-int
 $2x + 3(0) = 18 \quad x = 9 \quad \boxed{(9, 0)}$

y-int
 $2(0) + 3y = 18 \quad y = 6 \quad \boxed{(0, 6)}$

11. A line has a slope of $-\frac{3}{5}$ and an x-intercept at $(-10, 0)$. Find the y-intercept. $(0, y)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$-\frac{3}{5} = \frac{y - 0}{0 - (-10)}$$

$$-\frac{3}{5} = \frac{y}{10}$$

$$-30 = 5y$$

$$y = -6$$

\therefore y-int is $(0, -6)$

12. A line has a slope of $\frac{5}{2}$ and an y-intercept at $(0, -10)$. Find the x-intercept. $(x, 0)$

$$\frac{5}{2} = \frac{0 - (-10)}{x - 0}$$

$$\frac{5}{2} = \frac{10}{x}$$

$$x = 4$$

\therefore x-int is $(4, 0)$