***Slope-Intercept Equations – Exam Review #3***

**1.** Which of the following equations is linear?

**a.** *xy* = 6

**b.** *y* = 2 – 3*x*

**c.** *y* = 3$x^{2}$ + 1

**d.** $\frac{1}{x}=y$

**2.** Which of the following pairs of coordinates come from a line with a slope of $\frac{1}{2}$ ?

**a.** (2, 5), (–3, –5)

**b.** (–5, –8), (–8, 1)

**c.** (–4, 5), (–8, –5)

**d.** (–6, –4), (4, 1)

**Find the slope of the line that passes through each pair of points.**

** 3. 4. 5.**

 *m = m = m =*

**6.** Write the formula for slope-intercept form.*(HINT: It should include an y, b, x, and m)* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Write the linear equation in slope-intercept form for the line that has the given characteristics.**

 **7.** slope: –6, *y*-intercept: –2 **8.** slope: 7, *y*-intercept: 1

 **9.** slope: 1, *y*-intercept: –12 **10.** slope: 0, *y*-intercept: 8

**Calculate the value for *r* which represents a line with the given slope. (Hint: Set up a proportion!)**

**11.** (*r*, 2), (6, 3), *m* = $\frac{1}{2}$ **12.** (*r*, 4), (7, 1), *m* = $\frac{3}{4}$

**Write an equation in slope-intercept form for each graph shown.**

** 13. 14. 15.**

 *y = y = y =*

**Graph each equation.**

**16.** *y* = *x* + 4 **17.** *y* = –2*x* – 1 **18.** $-\frac{1}{3}x+y=-3$



**19.** Which of the following equations has a slope of 4 and includes the coordinate (1, 9)?

**a.** y = 4x + 5

**b.** y = 4x + 9

**c.** y = 4x + 1

**d.** y = 9x + 4

**What is the slope of a line that is parallel to the given equation?**

**20.** *y* = 3*x* + 4

**21.** *y* + 2x = 5

**22.** *y* = *x* – 4

**What is the slope of a line that is perpendicular to the given equation?**

**23.** *y* = –4*x* – 1

**24.** *y* = -*x* + 3

**25.** *y* = $\frac{1}{2}x$– 6

**26.** Write the equation of a line in slope-intercept form that includes the given point and is parallel to the given equation. **(–2, 3), *y* =** $\frac{1}{4}$ ***x* – 4**

**27.** Write the equation of a line in slope-intercept form that includes the given point and is perpendicular to the given equation. **(1, 4), *y* =** $\frac{1}{2}$ ***x* – 1**