
SAMPLE Math 19 Gateway Exam SAMPLE

Name: _____

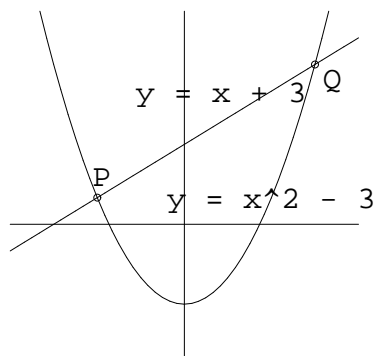
Date: _____

Circle the letter of the correct answer. Calculators are not allowed. Make sure you do the problems on the back of this sheet (if any). **Time allowed: 20 minutes.**

1. Evaluate and simplify the expression $\frac{m}{3m^2-v}$ if $m = -2v$.

- (a) $\frac{2}{6v+1}$ (b) $\frac{1}{6v} + 2$ (c) $\frac{1}{6}$ (d) $\frac{-2}{12v-1}$ (e) $-\frac{1}{6v} + 2$
-

2. What are the coordinates of the point Q?



- (a) (-2, 1) (b) (3, 3) (c) (3, 6) (d) (-3, 0) (e) (2, 5)
-

3. The y-intercept of the line having equation $-5 + 6y + 6x = 0$ is

- (a) $\frac{6}{5}$ (b) $\frac{5}{6}$ (c) $-\frac{5}{6}$ (d) $-\frac{6}{5}$ (e) -1
-

4. Which of the following is equivalent to $\left(\frac{x^{-2}y}{2z}\right)^{-1}$?

- (a) $\frac{1}{2x^2yz}$ (b) $\frac{2z}{x^2y}$ (c) $\frac{2x^2z}{y}$ (d) None of these expressions are equivalent (e) $\frac{2z}{x^3y}$
-

5. Which of the following is equivalent to $-5x\left(\frac{3}{x} - 2y\right)$?

- (a) $10y - 15$ (b) $10xy - 15$ (c) $-15 - 2y$ (d) $10xy - 15x$ (e) None of these expressions are equivalent.
-

6. If $w^2 + 2w + 1 = 6w - 3$, what are all possible values of w ?

- (a) $-1, \frac{1}{2}$ (b) $1, \frac{1}{2}$ (c) -1 (d) 2 (e) 1
-

7. Which of the following is equivalent to $(yU^{2/5})^{1/9}$?

- (a) $y^{10/9}U^{23/45}$ (b) $y^{1/9}U^{2/45}$ (c) $y^9U^{18/5}$ (d) None of these expressions are equivalent (e) $yU^{2/45}$
-

8. Suppose that $-3x + 9y = -6$ and $x + 7y = -2$. What is y ?

- (a) $-\frac{2}{5}$ (b) $\frac{4}{5}$ (c) $-\frac{2}{3}$ (d) $\frac{2}{5}$ (e) $-\frac{4}{5}$
-

9. If $y = \phi x^4 - x^3$ and $(3, 0)$ is a solution then what is ϕ ?

- (a) 3 (b) $\frac{3}{4}$ (c) -44 (d) $\frac{1}{3}$ (e) 27

10. Which of the following inequalities describes all of the x -values which are greater than -9 ?

- (a) $\infty > x > -9$ (b) $-8 \leq x < \infty$ (c) $-9 < x < 0$ (d) $-8 \leq x > \infty$ (e) $-9 < x > 0$

11. Which of the following is equivalent to $\frac{3}{7} + \frac{1}{8}$?

- (a) $\frac{3}{56}$ (b) $\frac{2}{-1}$ (c) $\frac{31}{56}$ (d) $\frac{4}{15}$ (e) $\frac{24}{7}$

12. If $(g + 4)(g + 5) = 30$, what are all possible values of g ?

- (a) 25 and 26 (b) 1 (c) -4 and -5 (d) -1 (e) -10 and 1