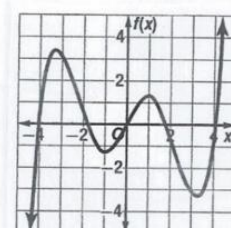


## Quarter 4 Spiral Review 5 Math II

Due Friday, May 6

1. The force,  $F$ , acting on a charged object varies inversely to the square of its distance,  $r$ , from another charged object. When the two objects are 0.64 meter apart, the force acting on them is 8.2 Newtons. **Approximately** how much force would the object feel if it is at a distance of 0.77 meter from the other object?
- A. 1.7 Newtons  
 B. 5.7 Newtons  
 C. 11.9 Newtons  
 D. 12.9 Newtons

2. Which of the following is true about the function at right?
- A. The end behavior is  $x \rightarrow -\infty f(x) \rightarrow +\infty, x \rightarrow +\infty f(x) \rightarrow -\infty$   
 B. The end behavior is  $x \rightarrow -\infty f(x) \rightarrow +\infty, x \rightarrow +\infty f(x) \rightarrow +\infty$   
 C. The function is odd  
 D. The function is even



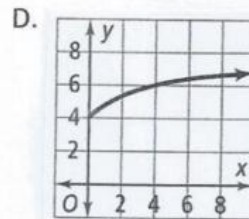
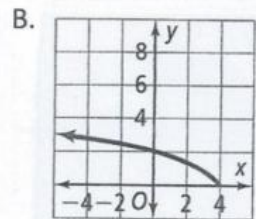
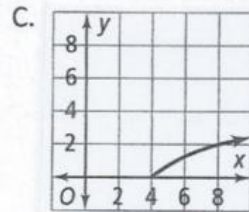
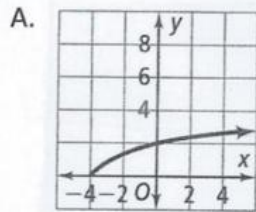
3. Simplify  $(8w^7x^{-5}y^3z^{-9})^{-\frac{2}{3}}$
- A.  $\frac{x^{\frac{10}{3}}z^6}{4w^{\frac{14}{3}}y^2}$     B.  $\frac{4w^{\frac{14}{3}}y^2}{x^{\frac{10}{3}}z^6}$     C.  $\frac{2w^{\frac{5}{3}}y^{\frac{1}{3}}}{x^{\frac{7}{3}}z^{\frac{11}{3}}}$     D.  $\frac{x^{\frac{7}{3}}z^{\frac{11}{3}}}{2w^{\frac{5}{3}}y^{\frac{1}{3}}}$

4. A wildlife biologist looks up at a  $78^\circ$  angle of elevation to see a flock of geese in the air. The biologist is standing 200 ft away from a place directly underneath the geese. How high are the geese flying, to the nearest tenth of a foot?
- A. 195.6 ft    B. 204.5 ft    C. 940.9 ft    D. 961.9 ft

5. A person standing on a 600 foot tall cliff looks down at two cars. Car 1 can be seen at an angle of depression of  $30^\circ$  and car 2 is seen at an angle of depression of  $22^\circ$ . **Approximately** how far apart are the two cars?
- A. 446 ft    B. 810 ft    C. 1039 ft    D. 1485 ft

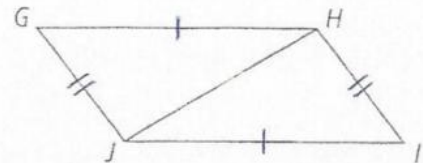
6. In a right triangle angle  $B$  and  $C$  are complementary angles. If the  $\sin B$  is decreased by 4, how with the  $\cos C$  change?
- A. The  $\cos C$  will increase by 4  
 B. The  $\cos C$  will decrease by 4  
 C. The  $\cos C$  will multiply by 4  
 D. The  $\cos C$  will not change

7. Which of the following is the graph of  $y = \sqrt{x} + 4$ ?



8. Based on the given information in the figure at the right, how can you justify that  $\triangle JHG \cong \triangle HJI$ ?

- A. ASA
- B. AAS
- C. SSS
- D. SAS



9. Which transformation will always produce a congruent figure?

- A.  $(x, y) \rightarrow (x + 2, 3y)$
- B.  $(x, y) \rightarrow (x - 3, y)$
- C.  $(x, y) \rightarrow (2x, 2y)$
- D.  $(x, y) \rightarrow (2x, y + 1)$

10.

Jason compared the function  $f(x) = 20(1.2)^x$  to the function that fits the values in the table below.

<b>x</b>	1	2	3	4	5
<b>g(x)</b>	12	24	48	96	192

What is the distance between the y-intercepts of the two functions?

- A. 14
- B. 8
- C. 6
- D. 4