1.
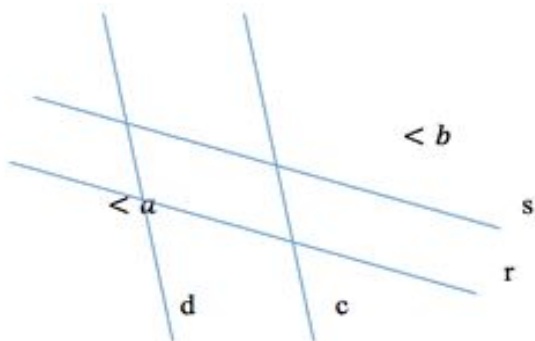

In the figure above, lines d and c are parallel and lines r and s are parallel. If $< b$ is equal to 115°, what is the value of $< a$?

A) 125°
B) 115°
C) 245⁰
D) 124°

2.

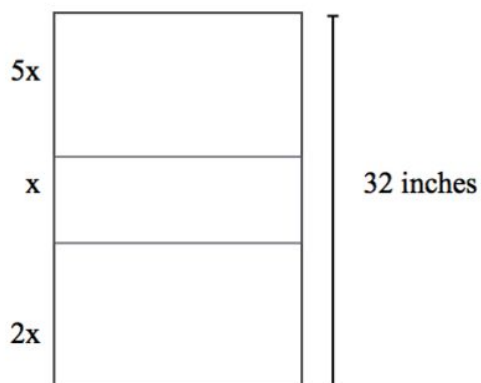In the xy-plane, the point (2,4) lies on the graph of the function $g(x)=4x^3-bx+12$. What is the value of b?

3.

Line l in the xy-plane contains points from Quadrants I and III, but no points from Quadrants II and IV. Which of the following must be true?

A) The slope of line l is negative
B) The slope of line l is 0
C) Line l passes through point (0,0)
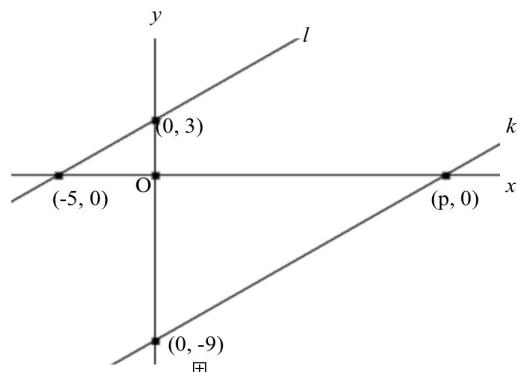D) Line l passes through point (-1,0)

4.

5x

x

2x

32 inches

Nicole has a rectangle shelf system in her dorm that fits in her closet. The total height of the system is 32 inches, and there are three parallel shelves that make up the system shown above. What is the maximum height for an item placed on the bottom shelf?

5.

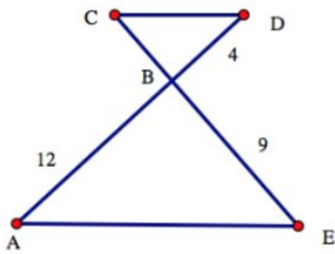In the xy-plane above, line l is parallel to line k. What is the value of p ?

A) 9
B) 10
C) 12
D) 15

6.

The graph of a line in the xy-plane has slope 3 and contains the point $(1, 2)$. The graph of a second line passes through the points $(1, -1)$ and $(2, 1)$. If the two lines intersect at the point (a, b), what is the value of $a + b$?

A) - 9
B) - 4
C) 1
D) 3

7.

18. In the figure above, $\overline{AE}||\overline{CD}$ and segment AD intersects segment CE at B. What is the length of segment CE?