8

$nA = 360$

The measure A, in degrees, of an exterior angle of a regular polygon is related to the number of sides, n, of the polygon by the formula above. If the measure of an exterior angle of a regular polygon is greater than 50°, what is the greatest number of sides it can have?

A) 5
B) 6
C) 7
D) 8

$n = \frac{360}{A} \rightarrow \frac{360}{50} = 7.2$

measure of ext ∠ in a regular polygon

$A = \frac{360}{n}$

$72 = \frac{360}{n}$

$\frac{360}{72} = n = 5$

$n = 5$

1) If the measure of an ext angle of a regular polygon is 72 degrees, how many sides does it have?

9

The graph of a line in the xy-plane has slope 2 and contains the point $(1, 8)$. The graph of a second line passes through the points $(1, 2)$ and $(2, 1)$. If the two lines intersect at the point (a, b), what is the value of $a + b$?

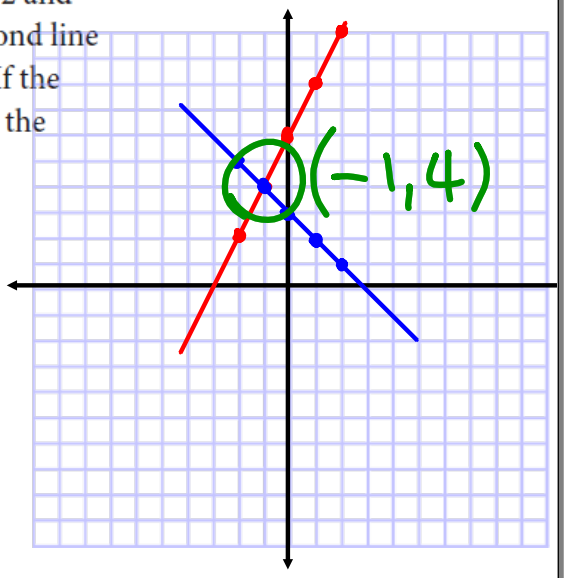
A) 4

B) 3

C) -1

D) -4

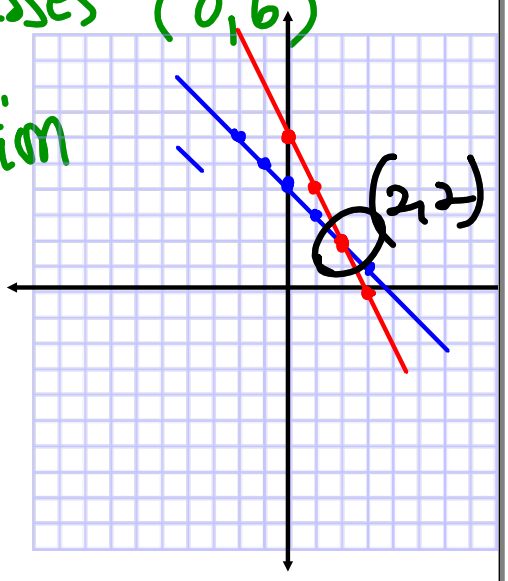
$-1+4=3$



l: passes $(3,1)$ & $(1,3)$

m: slope of -2 & passes $(0,6)$

Find the intersection



10

Which of the following equations has a graph in the xy-plane for which y is always greater than or equal to -1 ?

A) $y = |x| - 2$

B) $y = x^2 - 2$

C) $y = (x-2)^2$

D) $y = x^3 - 2$

11

Which of the following complex numbers is equivalent to $\frac{3-5i}{8+2i}$? (Note: $i = \sqrt{-1}$)

A) $\frac{3}{8} - \frac{5i}{2}$

B) $\frac{3}{8} + \frac{5i}{2}$

C) $\frac{7}{34} - \frac{23i}{34}$

D) $\frac{7}{34} + \frac{23i}{34}$

$i^2 = -1$

$\frac{(3-5i)(8-2i)}{(8+2i)(8-2i)} = \frac{24-6i-40i+10i^2}{64-16i+16i-4i^2}$

$= \frac{24-46i-10}{64+4}$

$= \frac{14-46i}{68}$

$\frac{7}{34} - \frac{23i}{34} = \frac{14}{68} - \frac{46i}{68}$