8

Which of the following is an equivalent form of

$(1.5x - 2.4)^2 - (5.2x^2 - 6.4)$?

A) $-2.2x^2 + 1.6$

B) $-2.2x^2 + 11.2$

C) $-2.95x^2 - 7.2x + 12.16$

D) $-2.95x^2 - 7.2x + 0.64$

12

$$\frac{1}{2}y = 4$$

$$x - \frac{1}{2}y = 2$$

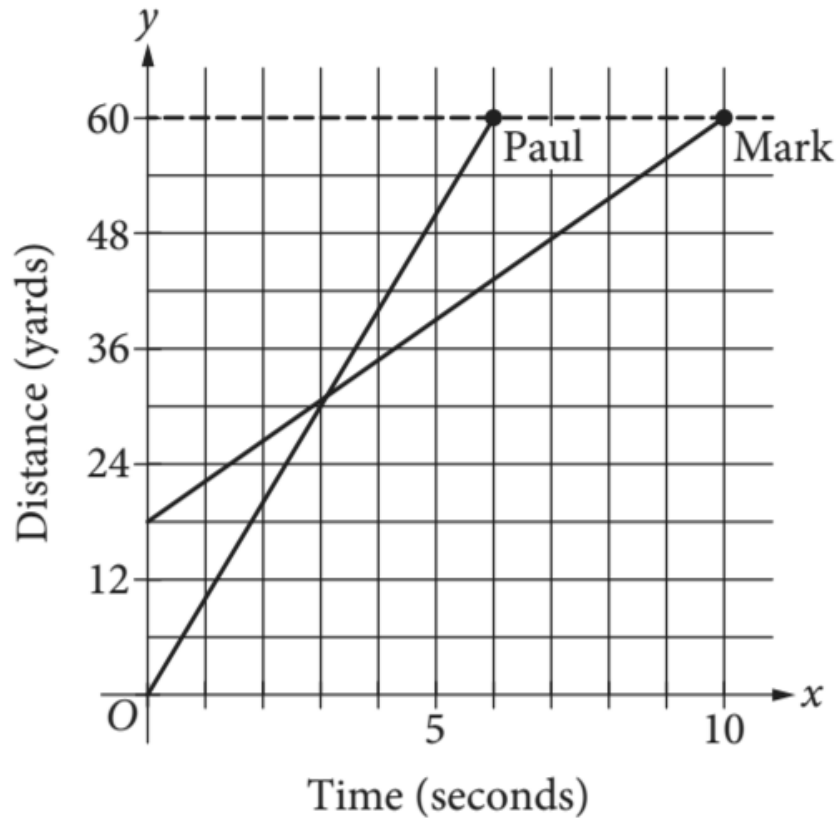The system of equations above has solution (x, y). What is the value of x ?

A) 3

B) $\dfrac{7}{2}$

C) 4

D) 6

In the xy-plane, the graph of
$2x^2 - 6x + 2y^2 + 2y = 45$ is a circle. What is the
radius of the circle?

A) 5

B) 6.5

C) $\sqrt{40}$

D) $\sqrt{50}$

The graph above shows the positions of Paul and Mark during a race. Paul and Mark each ran at a constant rate, and Mark was given a head start to shorten the distance he needed to run. Paul finished the race in 6 seconds, and Mark finished the race in 10 seconds. According to the graph, Mark was given a head start of how many yards?

A)   3

B)   12

C)   18

D)   24

4