

$$\frac{x}{2} \cancel{=} \frac{5}{4}$$

$$4x = 2(5)$$

$$4x = 10$$

$$x = \frac{10}{4}$$



$$\frac{x}{2} = \frac{5}{4}$$

$$x = \frac{2 \times 5}{4}$$

$$x = \frac{10}{4}$$



1

If $\frac{1}{x-y} = \frac{3}{5y}$, which of the following proportions is equivalent?

- A. $\frac{x}{y} = \frac{3}{8}$ $1(5y) = 3(x-y)$
 $5y = 3x - 3y$
- B. $\frac{x}{y} = \frac{8}{3}$ $5y + 3y = 3x$
- C. $\frac{x}{y} = \frac{8}{15}$ $8y = 3x$
- D. $\frac{x}{y} = \frac{15}{8}$ $\frac{2x}{5} = \frac{8}{3}$

3

If $\frac{2a}{3b} = \frac{1}{5}$, what is the value of $\frac{b}{a}$?

$$10a = 3b$$

$$\frac{b}{a} = \frac{10}{3}$$

2

If $2x - 3 = 0$, what is the value of

$$\frac{7}{3}x + \frac{1}{2} ?$$

$2x = 3$
 $x = \frac{3}{2}$

$$\frac{7}{3}\left(\frac{3}{2}\right) + \frac{1}{2}$$

$$\frac{7}{2} + \frac{1}{2} = \frac{7+1}{2}$$

$$= \frac{8}{2}$$

$$= 4$$

4

If $\frac{7}{x+2} = 0.5$, what is the value of x?

- A) 1.5
B) 3
C) 12
D) 16

$$\frac{7}{x+2} = \frac{1}{2}$$

$$1(x+2) = 2(7)$$

$$x+2 = 14$$

$$x = 12$$



1
shift
Solve

$$\frac{3y - 2(4 - 2y)}{3} = \frac{-11 + 3(2 + 3y)}{5}$$

What is the value of y in the equation above?

3.125

2

If $\frac{2}{5}$ of $10x$ is 6 more than x , what is the value of x ?

- A) 2
- B) 3
- C) 4
- D) 6

$$\frac{2}{5} \times 10x = 6 + x$$

shift
Solve

3

If $\frac{2x-4}{4} - \frac{x+1}{6} = t + 1$ and $t = 3$, what

is the value of x ?

A. 27

B. -1

C. 11

D. $\frac{31}{2}$

$$\frac{2x-4}{4} - \frac{x+1}{6} = 3 + 1$$

shift
Solve
15.5

$\sqrt{\quad} = +ve \text{ or } zero$

$\sqrt{\quad} \neq -5$

$$\sqrt{x+6} = x$$

~~without solving~~

a) -1
 b) -2
 c) -3
 d) 3



~~-ve~~

$$\sqrt{x+1} = 5^2$$

a) 4

b) 5

c) 24

d) 26

$$x+1 = 25$$

$$x = 25 - 1$$

$x = 24$

$\sqrt{\quad} = -ve$

$\sqrt{25} = 5$
$-\sqrt{25} = -5$
$x^2 = 25$
$x = \pm 5$



1

$$3x - 1 = \sqrt{3k^2 - x}$$

If $k > 0$ and $x = 2$ in the equation above, what is the value of k ?

(Grid in) $3(2) - 1 = \sqrt{3k^2 - 2}$

$$\begin{aligned} 5^2 &= \sqrt{3k^2 - 2} \\ 25 &= 3k^2 - 2 \\ 27 &= 3k^2 \\ k^2 &= 9 \\ k &= \pm 3 \end{aligned}$$

$$\sqrt{x-7} = 7^2$$

2

What value of x satisfies the given equation?

- A) 0
- B) 14
- C) 42
- D) 56

$$\begin{aligned} x - 7 &= 49 \\ x &= 49 + 7 \end{aligned}$$

3

$$\sqrt{k+2} - x = 0$$

In the equation above, k is a constant. If $x = 9$, what is the value of k ?

- A) 1
- B) 7
- C) 16
- D) 79

$$\begin{aligned} \sqrt{k+2} - 9 &= 0 \\ \sqrt{k+2} &= 9^2 \\ k+2 &= 81 \\ k &= 81 - 2 \end{aligned}$$



1

The solution set of the equation

$$\sqrt{2x+1} - x = -1 \text{ is:}$$

A. $\{0, 1, 4\}$

B. $\{1, 4\}$

C. $\{4\}$

D. $\{0\}$

$$\begin{aligned} \sqrt{2x+1} &= -1 + x \\ -1 + 0 &= -1 \times 1 \\ \sqrt{3} &\neq 0 \end{aligned}$$

2

$$x - 2 = \sqrt{x + 10}$$

Which of the following values of x is a solution to the equation above?

- A) -1
B) 1
C) 4
 D) 6

Shift
Solve

3

Which of the following is a solution to the equation

- A. $\sqrt{14-x} + 2 = x$? shift
Solve
5
- B. -2
- C. 1
- D. 5
- E. I only
- F. II only
- G. III only
- H. I and III

$$\begin{aligned} \sqrt{14-(-2)} + 2 &= -2 \\ 4 &\neq -2 \end{aligned}$$

EST Math

$$2x + 1 > 5$$

$$2x > 4$$

$$x > \frac{4}{2}$$

$$x > 2$$

$$2x + 1 = 5$$

$$2x = 4$$

$$x = \frac{4}{2}$$

$$x = 2$$

$$1 - x < 9$$

$$-x < 9 - 1$$

$$-x < 8$$

$$x > \frac{8}{-1}$$

\therefore

$-ve$

Change



Inequalities (Solve)

$$3 \leq 2x - 1 < 9$$

$$3 + 1 \leq 2x < 9 + 1$$

$$\frac{4}{2} \leq 2x < \frac{10}{2}$$

$$2 \leq x < 5$$

