

Solve. Write your answer in simplest form and include any relevant units.

#1 $-8 + 3x = -16$

$$2(x - 7) = 4x - 8$$

#2 $6x + 9 = 18x - 3(x - 27)$

$$3(x + 2) + x = 4(x - 1) + 5$$

#3 $7(x - 4) - 5 = -6(-5x + 3) - 5x$

$$\left(\frac{1}{8}\right)x - 2 = 0$$

#4 $\frac{1}{4}(x - 8) = \frac{1}{2}(x + 2)$

$$3(x + 1) - 2 = 3x - 1$$

Solve. Graph the solution set on a number line.

#5 $-8 + 2x \geq 12$

#6 $11 - 6x < 5 - 8x$

#7 $3x - 3 > 0$ or $3x + 3 < -9$

#8 $-10 \leq 6x - 4 \leq 8$

#9 Find 15% of 40.

27 is 45% of what number?

#10 An item is regularly priced at \$40. If the item is on sale for a 15% discount, what is the sale price of the item?

#11 The perimeter of a rectangular field is 282 yards. If the width of the field is 65 yards, what is its length? (Recall: $P = 2w + 2\ell$)

#12 Jeffrey is 12 years older than Robert. Robert is two-thirds the age of Jeffrey. How old are Robert and Jeffrey?

Solve. Write your answer in simplest form and include any relevant units.

#1 $-6 + 7x = -15$

$$-2(x - 7) = 4x - 4$$

#2 $2x + 3 = 6x - (x - 27)$

$$3(x + 2) + x = 4(x - 1) + 10$$

#3 $7(x - 4) - 5 = -6(-5x + 3) - 5x$

$$\left(\frac{1}{4}\right)x + 2 = 6$$

#4 $\frac{1}{4}(x - 8) = \frac{1}{2}(x + 2)$

$$3(x + 1) - 2 = 3(x - 1)$$

Solve. Graph the solution set on a number line.

#5 $-5 + 3x \geq 7$

#6 $8 - 6x < 13 - x$

#7 $3x + 3 > 0$ or $2x + 3 < -9$

#8 $-11 \leq 4x - 3 \leq 9$

#9 Find 20% of 60.

27 is 75% of what number?

#10 An item is regularly priced at \$60. If the item is on sale for a 20% discount, what is the sale price of the item?

#11 The perimeter of a rectangular field is 282 yards. If the width of the field is 65 yards, what is its length? (Recall: $P = 2w + 2\ell$)

#12 Jeffrey is 10 years older than Paul. How old are Paul and Jeffrey if the sum of their ages is 62?