

# ONE STEP

## EQUATIONS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Solve for letter.**

1)  $x - 3 = 4$

7)  $22 = -11k$

13)  $\frac{x}{6} = 8$

2)  $v - 10 = -9$

8)  $-40 = -5p$

14)  $\frac{w}{-3} = 6$

3)  $-8 - p = -13$

9)  $4x = 12$

15)  $-7 = t/7$

4)  $0 = 4 + q$

10)  $5g = 20$

16)  $y \div 7 = 1$

5)  $t - (-5) = 9$

11)  $-54 = 9s$

17)  $p/5 = 3$

6)  $k+1 = -27$

12)  $-8r = 64$

18)  $x \div (-2) = 8$

# COMBINE

## LIKE TERMS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Combine things that are similar. Leave the rest alone.**

1)  $-3p + 6p$

7)  $9 + 5r - 9r$

13)  $b - 3 + 6 - 2b$

2)  $7x - x$

8)  $35n - 1 + 46$

14)  $-7k + 56 + 2k - 6$

3)  $-10v + 6v$

9)  $1 - 3v + 10$

15)  $3 - 56 + 40n - (-n)$

4)  $30n + 8n$

10)  $4b + 6 + 4$

16)  $1 + 7 - 21b + (-4b)$

5)  $7p - 10p$

11)  $-4p - 1 + 6p$

17)  $4 - 20n - 15 + 10n$

6)  $-9r + 10r$

12)  $-14 + 2n + 4$

18)  $10x + 36 - 38x - 47$

# DISTRIBUTIVE

## METHOD

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**DISTRIBUTE (MULTIPLY) NUMBER OUTSIDE PARENTHESIS TO THE TERMS INSIDE THE PARENTHESES. COMBINE LIKE TERMS IF POSSIBLE.**

1)  $6(1 - 5m)$

7)  $-(1 - 5v)$

13)  $-2(7 - n) + 4$

2)  $3(4 + 3r)$

8)  $-(6r + 8)$

14)  $-4p - (1 - 6p)$

3)  $4(8n + 2)$

9)  $-(-2 - n)$

15)  $-7(k - 8) + 2k$

4)  $-6(7k + 11)$

10)  $-(7n + 1)$

16)  $3 - 8(7 - 5n)$

5)  $-3(1 + 2v)$

11)  $-(a - 5)$

17)  $4 - 5(-4 + 3)$

6)  $-2(3 - 7k)$

12)  $-(3x + 2)$

18)  $1 + 6(1 - 3b)$

# MULTI-STEP

## EQUATIONS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Solve for letter.**

1)  $3w + 7 = 19$

7)  $12v + 10v + 14 = 80$

13)  $-2(4g - 3) = 30$

2)  $11 = 12 - q$

8)  $6c - 8 - 2c = -16$

14)  $27 = 3c - 3(6 - 2c)$

3)  $10 = 7 - m$

9)  $4(z + 5) = 32$

15)  $-3 = 12y - 5(2y - 7)$

4)  $2g - 13 = 3$

10)  $6 + 5(m + 1) = 26$

16)  $-3(3 + x) + 4(x - 6) = -4$

5)  $36 = 13n - 4n$

11)  $5h + 2(11 - h) = -5$

17)  $5(r + 9) - 2(1 - r) = 1$

6)  $8y + 3y = 44$

12)  $\frac{d-8}{-2} = 12$

18)  $2(x + 3) + x = -9$

# EQUATIONS

## WITH VARIABLES ON BOTH SIDES

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Solve for the letter.**

1)  $15 - 2x = 3x$

5)  $10(g + 5) = 2(g + 9)$

9)  $10(g + 5) = 2(g + 9)$

2)  $5p - 9 = 2p + 12$

6)  $-9(t - 2) = 4(t - 15)$

10)  $-9(t - 2) = 4(t - 15)$

3)  $5t + 16 = 6 - 5t$

7)  $7 + 3x - 12x = 3x + 1$

11)  $10(2y + 2) - y = 2(8y - 8)$

4)  $-3r + 10 = 15r - 8$

8)  $w - 2 + 2w = 6 + 5w$

12)  $2(4x + 2) = 4x - 12(x - 1)$

# EQUATIONS

## WITH ABSOLUTE VALUE

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Solve for the letter.**

1)  $|x - 4| = 6$

4)  $|3x - 4| = |x|$

2)  $|3x + 1| = -5$

5)  $|4x - 10| = 2|3x + 1|$

3)  $|3x + 9| - 10 = -4$

6)  $|2x + 12| = 4x$

# LITERAL

## EQUATIONS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

1) Solve  $d = rt$  for  $r$

7) Solve  $d = \frac{C}{\pi}$  for  $\pi$

2) Solve  $P = \frac{144p}{y}$  for  $p$ .

8) Solve  $F = \frac{lt}{d}$  for  $l$

3) Solve  $P = a + b + c$  for  $b$

9) Solve  $A = \frac{1}{2}bh$  for  $b$

4) Solve  $V = lwh$  for  $w$

10) Solve  $A = S(1 - DN)$  for  $N$

5) Solve  $m = \frac{y_2 - y}{x_2 - x}$  for  $y$

11) Solve  $V = \frac{1}{3}\pi h(3r^2 - h)$  for  $r^2$

6)  $T = m - n$  for  $n$

12) Solve  $E = mc^2$  for  $c^2$

# EQUATIONS

## WITH FRACTIONS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Solve for the letter.**

1)  $n - (4/7) = 3$

5)  $5 (1/2) + p = 6$

2)  $(39/5) = 2m$

6)  $m - 1 (1/2) = (-5/4)$

3)  $(1/3) = n + (4/3)$

7)  $x - (1/2) = 1 (1/4)$

4)  $(-26/33) = (13/11)x$

8)  $x - 1 (1/4) = -6$



# EQUATIONS

## WORD PROBLEMS LEVEL 1

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Answer the question. Don't forget to include units!**

- 1) At McDonalds, 4 friends decided to split the bill evenly. How much did each person pay if the total bill came to \$56?
- 2) How many cookies can you buy with 24\$ if each one cost 3\$?
- 3) Last week Sophia ran 24 miles more than Anne. Sophia ran 56 miles. How many miles did Anne run?
- 4) Alice went to the Francesca's to buy new earrings. The earrings are 14.95\$. If Alice gave the cashier a 20\$ bill how much change is she supposed to get back?
- 5) Dom wants to buy all his friends ice cream after school. Dom has 4 friends with him. If each ice cream is \$6 how much does Dom need to pay, if he also buys an ice cream for himself?
- 6) Angie made 50\$ babysitting over the weekend but she lost some of it. Now she only has 35\$. How much money did she lose?

# EQUATIONS

## WORD PROBLEMS LEVEL 2

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**Answer the question. Don't forget to include units!**

- 1) The sum of 4 consecutive integers is 67. What is the smallest of these numbers?
  
- 2) Maria bought a new box of pens for 7\$ and she also got 4 new notebooks. She spent a total of 19\$. How much did each notebook cost?
  
- 3) Elizabeth and 5 other students use their car to get to school. All the other students fill up 7 buses. If there is a total of 509 students, how many students can fit in one bus?
  
- 4) Jason gifted half of his dancing shoes and then bought twelve more. Now he has 90 shoes. How many dancing shoes did he start with?
  
- 5) Helene made some cakes for her bakery. Her assistant Margarita made 6 cakes for the bakery. Margarita cut each cake into 10 slices. There was a total 175 slices of cake for sale. How many slices did Helene make?
  
- 6) How old is Patrick, if 20 minus 5, times his age is 525?

# DSAT

## EQUATION QUESTIONS

Name: \_\_\_\_\_ Class: \_\_\_\_\_

1)  $3x - 1 = 5$   
Solve for x.

2)  $(\frac{3}{4})x + (\frac{1}{2}) = 5$   
Solve for x.

3)  $(15-a)/2 = 5$   
Solve for (15-a).

4)  $2 - 3x < 14$   
Solve for x.

5) Find the solution set for  $2x - 1 > 5x + 8$   
a)  $x < -3$   
b)  $x < -1$   
c)  $x > 1$   
d)  $x > 3$

6) What is the value of h,  
if  $(h + 1) - (5h - 1) = 14$ ?

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

7)  $5p - 5 = 15 - 5p$   
Which of the following is the solution set to the equation shown above?

- a) One solution,  $p = -1$
- b) One solution,  $p = 2$
- c) Infinitely Many Solutions
- d) No solutions

8)  $5 + 3x < 3x - 2$

Which of the following best describes the solutions to the inequality shown above?

- a)  $x > (1/3)$
- b)  $x < (-1/3)$
- c) All Real Numbers
- d) No Solution