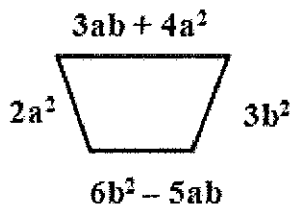


Algebraic Equation Study Guide 2014

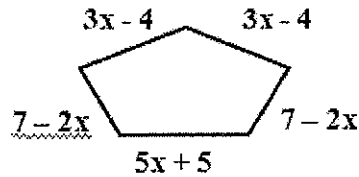
Combine Like Terms-Simplify:

1. $6w^2 + 11w + 8w^2 - 15w$

2. Find the perimeter.



3. Find the perimeter.



Use the Distributive Property and Simplify:

4. $6(4x^2 - 5x + 2) + 3(-8x^2 + 11x + 4)$

5. $4(6x^3 - 4x^2 + 11) - (5x^2 + 9)$

6. $6(4x^2 - 3x + 2) + 5(3x - 6)$

7. $\frac{15x+55}{-5} - 6x - 45$

Solve(make sure to show all steps):

8) $x + 5 = -12$

9) $x - 11 = -19$

10) $5x = -30$

11) $\frac{x}{-5} = 3$

Solve:

12) $9x - 11 = -38$

13) $32 - 6x = 56$

14) $\frac{x}{7} - 4 = 4$

15) $-\frac{6}{7}x + 2 = 5$

16) $\frac{x}{1/5} + 4 = 2\frac{1}{2}$

Solve:

17) $3(4x - 5) + 2(11 - 2x) = 39$

18) $9(3x + 6) - 6(7x - 3) = 12$

19) $7(4x - 5) - 4(6x + 5) = -91$

Solve:

20) $-6a + 5 = -2a + -3$

21) $8 + 5a = 8(a + 4)$

22) $2(r - 4) = 5(r + -7)$

Solve:

23) $\frac{2}{3}(x + 5) = \frac{4}{9}$

24) $\frac{x}{2} + \frac{1}{3} = \frac{x}{3} + \frac{1}{2}$

Define the variable. Write an equation. Solve:

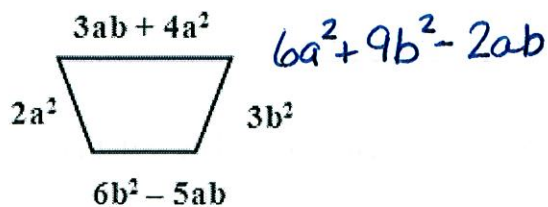
- 25) The temperature rose 15 degrees to 70°F. What was the original temperature? Let t represent the original temp.
- 26) If one roll of masking tape costs \$1.15, how many rolls can Max buy with \$5.75?
- 27) Max's employer has \$18.00 to spend on tape measures for his crew. How many can he buy with that amount if each tape measure costs \$4.50?
- 28) Amanda and her best friend found some money buried in a field. They split the money evenly, each getting \$24.28. How much money did they find?
- 29) Laci went to the mall and spent \$35.00 on shoes. When she left she had \$40.00 in her purse. How much money did she start with?
- 30) Ricky rides his bike 12 miles every day. He stops after 7 miles to rest. Write and solve an equation to find out how much further he has to ride.
- 31) Alex rents a car for one day. The charge is \$18 plus \$0.12 per mile. Alex wants to spend exactly \$30. How many miles can he drive?
- 32) Nick opens a savings account with \$50. Each week after, he deposits \$15. In how many weeks will he have saved \$500?
- 33) Katie wants to buy a bicycle that costs \$129. This is \$24 more than 3 times what she saved last month. How much did she save last month?
- 34) Ryan made a \$3000 down payment on a car. The total cost of the car was \$7500. He made 36 equal monthly payments to pay the car in full. How much did Ryan pay per month?

Algebraic Equation Study Guide 2014

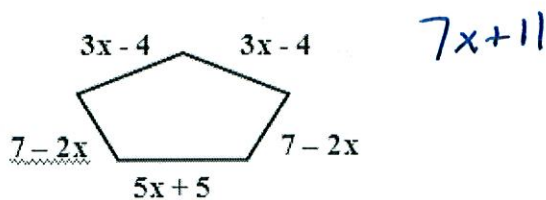
Combine Like Terms-Simplify:

1. $6w^2 + 11w + 8w^2 - 15w$ $14w^2 - 4w$

2. Find the perimeter.



3. Find the perimeter.



Use the Distributive Property and Simplify:

4. $6(4x^2 - 5x + 2) + 3(-8x^2 + 11x + 4)$
 $3x + 24$

5. $4(6x^3 - 4x^2 + 11) - (5x^2 + 9)$
 $24x^3 - 21x^2 + 35$

6. $6(4x^2 - 3x + 2) + 5(3x - 6)$
 $24x^2 - 3x - 18$

7. $\frac{15x+55}{-5} - 6x - 45$
 $-9x - 56$

Solve (make sure to show all steps):

8) $x + 5 = -12$
 $x = -17$

9) $x - 11 = -19$
 $x = -8$

10) $5x = -30$
 $x = -6$

11) $\frac{x}{-5} = 3$
 $x = -15$

Solve:

12) $9x - 11 = -38$
 $x = -3$

13) $32 - 6x = 56$
 $x = -4$

14) $\frac{x}{7} - 4 = 4$
 $x = 56$

15) $-\frac{6}{7}x + 2 = 5$
 $x = -\frac{7}{2}$

16) $\frac{x}{1/5} + 4 = 2\frac{1}{2}$
 $x = -\frac{3}{10}$

Solve:

17) $3(4x - 5) + 2(11 - 2x) = 39$
 $x = 4$

18) $9(3x + 6) - 6(7x - 3) = 12$
 $x = 4$

19) $7(4x - 5) - 4(6x + 5) = -91$
 $x = -9$

Solve:

20) $-6a + 5 = -2a + -3$
 $a = 2$

21) $8 + 5a = 8(a + 4)$
 $a = -8$

22) $2(r - 4) = 5(r + -7)$
 $r = 9$

Solve:

* 23) $\frac{2}{3}(x + 5) = \frac{4}{9}$
 $x = -\frac{13}{3}$

24) $\frac{x}{2} + \frac{1}{3} = \frac{x}{3} + \frac{1}{2}$
 $x = 1$

Define the variable. Write an equation. Solve:

25) The temperature rose 15 degrees to 70F. What was the original temperature? Let t represent the original temp.

-8°

26) If one roll of masking tape costs \$1.15, how many rolls can Max buy with \$5.75?

5

27) Max's employer has \$18.00 to spend on tape measures for his crew. How many can he buy with that amount if each tape measure costs \$4.50?

4

28) Amanda and her best friend found some money buried in a field. They split the money evenly, each getting \$24.28. How much money did they find?

\$48.56

29) Larechia went to the mall and spent \$35.00 on shoes. When she left she had \$40.00 in her purse. How much money did she start with?

\$75

30) Ricky rides his bike 12 miles every day. He stops after 7 miles to rest. Write and solve an equation to find out how much further he has to ride.

5

31) Alex rents a car for one day. The charge is \$18 plus \$0.12 per mile. Alex wants to spend exactly \$30. How many miles can he drive?

\$100.

32) Nick opens a savings account with \$50. Each week after, he deposits \$15. In how many weeks will he have saved \$500?

30 weeks

33) Katie wants to buy a bicycle that costs \$129. This is \$24 more than 3 times what she saved last month. How much did she save last month?

\$35

34) Ryan made a \$3000 down payment on a car. The total cost of the car was \$7500. He made 36 equal monthly payments to pay the car in full. How much did Ryan pay per month?

\$125.00