

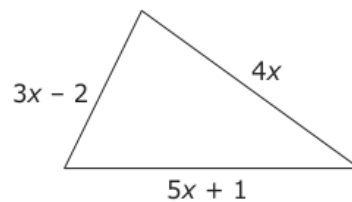
- Simplify:  $-2.5(7.5 - 3x)$
- Simplify:  $3(m + 2) - 4(2m - 9)$
- Linda and James each wrote an expression using the variables  $a$ ,  $b$ , and  $c$ .

Linda's expression:  $2a + 10b - c$

James's expression:  $-3a + 5b + c$

What is the sum of the two expressions?

- What is the perimeter of the triangle below?



- Simplify:  $8 - 5(x - 3)$
- Simplify:  $-\frac{5}{6}x - 4\left(\frac{3}{8}x + \frac{5}{4}y\right)$
- Dwight is selling  $22\frac{1}{2}$  acres of his land. He is dividing the land into 0.75-acre lots. He is selling each lot for \$26,000. How much money will Dwight make if he sells all of the lots?

- Amanda worked  $27\frac{1}{2}$  hours each week for 4 weeks, and then she worked  $32\frac{1}{2}$  hours each week for the next 4 weeks. She used the distributive property to help her mentally compute her total hours worked. Which of the following could be the expression Amanda used?

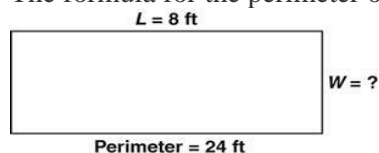
A.  $4\left(27\frac{1}{2}\right) + 4\left(32\frac{1}{2}\right) = 4\left(27\frac{1}{2}\right)\left(32\frac{1}{2}\right)$

B.  $4\left(27\frac{1}{2}\right) + 4\left(32\frac{1}{2}\right) = 4\left(27\frac{1}{2} + 32\frac{1}{2}\right)$

C.  $4\left(27\frac{1}{2}\right) + 4\left(32\frac{1}{2}\right) = 8\left(27\frac{1}{2} + 32\frac{1}{2}\right)$

D.  $4\left(27\frac{1}{2}\right) + 4\left(32\frac{1}{2}\right) = 4(4)\left(27\frac{1}{2}\right)\left(32\frac{1}{2}\right)$

- A veterinarian says that 0.6 of his current cat patients are in need of an inoculation. If he has 238 cats as patients, about how many do not need inoculations?
- The formula for the perimeter of a rectangle is  $P = 2L + 2W$ . The perimeter of the rectangle below is 24 ft.



What is the width of the rectangle?

11. The sum of four consecutive integers is 34. What is the smallest of the four integers? You must write an equation and solve to receive credit.
12. Kendall has only quarters and dimes in her pocket. The total value of these coins is \$1.50. The equation below can be used to find  $q$ , the number of quarters, and  $d$ , the number of dimes in her pocket.  
 $25q + 10d = 150$   
If Kendall has 4 quarters in her pocket, how many dimes are in her pocket?
13. Raj has 2 options when leasing a new car.

Option A: \$2,000 due at signing and a monthly payment for 36 months for a total of \$7,220.

Option B: \$1,500 due at signing and a monthly payment for 36 months for a total of \$7,080.

Which statement about these options is true?

- A. The monthly payments are equal.      B. Option A has a lower monthly payment  
C. Option B has a lower monthly payment.      D. The difference in the monthly payments is less than \$10
14. Jeremy has \$36 saved. He wants to have \$300 for a trip next year. He will save the same amount of money each month for the next 12 months. How much money will Jeremy need to save each month? You must write an equation and solve to receive credit.
15. An ice cream store charges 75 cents for each scoop of ice cream and 25 cents for each cone. The formula  $c = 0.75x + 0.25$  can be used to determine  $c$ , the total cost for an ice cream cone with  $x$  scoops of ice cream. According to the formula, how much should it cost to buy an ice cream cone with 4 scoops of ice cream?
16. Harley has 26 pints of strawberries in his store. He keeps 2 pints of strawberries for himself. Harley separates the remaining pints into 6 equal groups to sell. Write and solve an equation that can be used to find  $p$ , the number of pints of strawberries in each group.
17. What is the value of  $y$  in the equation  $\frac{2}{3}y - 1 = \frac{1}{4}$
18. What is the distance, in units, from  $-7$  to  $2$  on a number line?
19. A pilot flew a total of 9135 miles during 42 flights. The pilot flew the same distance for each flight. What was the distance of each flight? You must write an equation and solve to receive credit.
20. The Wiretex Company offers three long distance options for its customers. Plan A charges \$25 per month and \$0.05 per minute. Plan B charges \$5 per month and \$0.13 per minute. Plan C charges a fee of \$40 per month with no charges for each minute. If Stacey averages 3.5 hours of long distance use each month, which plan is least expensive for her? You must write and solve an equation to find the cost of each company to receive credit.