**Solving equations**

Name: Div.: Date:

Write out and solve the following equations based on the diagrams provided:

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Solve the following questions using algebra tiles/diagrams to show your work. Check your work using substitution evaluation:

Solve the following questions using opposite operations to show your work. Check your work using substitution evaluation:

Solve the following by writing an equation, and using a diagram:

1. The mass of a white-tailed deer is 1.4 times that of a cougar. What does a cougar weight if the average mass of a white-tailed deer is 98kg?
2. People can be left-handed, right-handed, or ambidextrous. The number of boys who are left-handed is about one seventh of the number of boys who are right-handed. If 11% of boys are left handed what percent of boys are right handed? Write an equation and solve.
3. There is a 5km stretch of road where road work is happening. The speed limit has been changed from 50km/hr to 20km/hr. How many minutes does that add to the drive time on this section of road?
4. Matt is saving $750 for a new clothes’ dryer. If he triples his current savings he will have $30 more than he needs. How much money does Matt have saved so far?
5. If Jennifer doubles the money she has in her account now and then took out $50, she would have enough left in her account to buy a new bike that costs $300. How much money does Jennifer have now?
6. Tom ordered a pizza from Panago for $14.25. If the cheese pizza costs $10.50 and each topping costs $0.75. How many toppings did Tom order?
7. A cab ride cost Sam $16. The ride costs $2.50 plus $1.50/km. How far did Sam travel?
8. Marina ordered a pizza from Panago for $14.25. The cost of the pizza is found by the cost of a cheese pizza plus the cost per topping. Each topping costs $0.75 and Marina ordered 3 toppings. How much does just a cheese pizza cost?
9. A cab ride cost Peter $18.50. A ride costs $1.25 per km plus an initial fee. Peter travelled 12km on his ride. How much is the initial fee?
10. A car salesman makes his hourly wage of $9/hr plus a 25% commission on the profit made from any car he sells.
    1. How much profit does a dealership make on cars if the salesman sold ten cars for a commission of $2500?
    2. How much will a car salesperson make working 40 hours a week and selling 6 cars (use your profit information from above)?