

8.8B Write a Corresponding Real World Problem

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- 1** Which situation can be represented by the equation  $1500 - 50x = 2000 - 100x$
- A** There are two water tanks in the city. One has 1500 gallons and gains 50 gallons each hour. The other tanks has 2000 gallons and gains 100 gallons each hour. When will the tanks have the same amount of water?
- B** There are two water tanks in the city. One tanks has 1500 gallons and loses 50 gallons each hour. The other tank has 2000 gallons and loses 100 gallons each hour. When will the tanks have the same amount of water?
- C** There are two water tanks in the city. One tanks has 1500 gallons and loses 50 gallons each hour. The other tank has 2000 gallons and gains 100 gallons each hour. When will the tanks have the same amount of water?
- D** There are two water tanks in the city. One tanks has 1500 gallons and loses 50 gallons each hour. The other tank has 2000 gallons and loses 100 gallons each hour. When will the bigger tank have more water?

2 Which situation best represents the following equation?

$$30 + 4x = 70 + 2x$$

- A There are two limo companies that charge based on the number of people,  $x$ , that they carry. Limo A charges \$30 plus \$2 per person. Limo B charges \$70 plus \$4 per person. How many people can ride to make the two companies charge the same amount?
- B There are two limo companies that charge based on the number of people,  $x$ , that they carry. Limo A charges \$30 plus \$70 per person. Limo B charges \$4 plus \$2 per person. How many people can ride to make the two companies charge the same amount?
- C There are two limo companies that charge based on the number of people,  $x$ , that they carry. Limo A charges \$30 plus \$4 per person. Limo B charges \$70 plus \$2 per person. How many people can ride to make the two companies charge the same amount?
- D There are two limo companies that charge based on the number of people,  $x$ , that they carry. Limo A charges \$30 per person. Limo B charges \$70 plus \$2 per person. How many people can ride to make the two companies charge the same amount?

3 Which situation best represents the following equation?

$$25 + .05x = 50 + .01x$$

- A There are two cell phone companies that charge based on the number of minutes used each month,  $x$ . Cellular One charges \$50 plus 5 cents per minute. Cellular Plus charges \$25 plus 1 cent per minute. How many minutes can be used in one month to make the two companies charge the same amount?
- B There are two cell phone companies that charge based on the number of minutes used each month,  $x$ . Cellular One charges \$25 plus \$5 per minute. Cellular Plus charges \$50 plus \$1 per minute. How many minutes can be used in one month to make the two companies charge the same amount?
- C There are two cell phone companies that charge based on the number of minutes used each month,  $x$ . Cellular One charges \$25 plus 5 cents per minute. Cellular Plus charges \$50. How many minutes can be used in one month to make the two companies charge the same amount?
- D There are two cell phone companies that charge based on the number of minutes used each month,  $x$ . Cellular One charges \$25 plus 5 cents per minute. Cellular Plus charges \$50 plus 1 cent per minute. How many minutes can be used in one month to make the two companies charge the same amount?

- 4 At a store each notebook has a cost of  $x$  dollars. Which situation can be represented by this inequality?

$$5x < 3x + 2$$

- A** The cost of 5 notebooks is greater than the cost of 3 notebooks plus a \$2 pen.  
**B** The cost of 5 notebooks is less than the cost of 3 notebooks with a \$2-off coupon.  
**C** The cost of 5 notebooks is \$2 greater than the price of 3 notebooks.  
**D** The cost of 5 notebooks is less than the cost of 3 notebooks plus a \$2 pen.
- 5 Which situation best represents the following equation?

$$6x > 50 + 2.80x$$

- A** Sara makes hair clips and sells them for \$50 each. Her total costs are \$6 plus \$2.80 per clip. How many clips,  $x$ , does she have to sell to make a profit?  
**B** Sara makes hair clips and sells them for \$6 each. Her total costs are \$50 plus \$2.80 per clip. How many clips,  $x$ , does she have to sell to make a profit?  
**C** Sara makes hair clips and sells them for \$6 each. Her total cost is \$50. How many clips,  $x$ , does she have to sell to make a profit?

6 Which situation best represents the following equation?

$$15 + .15x < 25 + .05x$$

- A** Ibin is renting a car and is comparing two companies. Cars-R-Us charges \$15 per day plus 15 cents per mile. Cars-Unlimited charges \$25 per day plus 5 cents per mile. What is the minimum number of miles he must drive each day for Cars-Unlimited to be his cheapest option?
- B** Ibin is renting a car and is comparing two companies. Cars-R-Us charges \$15 per day plus 5 cents per mile. Cars-Unlimited charges \$25 per day plus 15 cents per mile. What is the minimum number of miles he must drive each day for Cars-Unlimited to be his cheapest option?
- C** Ibin is renting a car and is comparing two companies. Cars-R-Us charges \$15 per day plus 15 cents per mile. Cars-Unlimited charges \$25 per day plus 5 cents per mile. What is the maximum number of miles he can drive each day for Cars-R-Us to be his cheaper?
- D** Ibin is renting a car and is comparing two companies. Cars-R-Us charges \$15 per day plus 5 cents per mile. Cars-Unlimited charges \$25 per day plus 15 cents per mile. What is the minimum number of miles he must drive each day for Cars-R-Us to be his cheapest option?