Name_____

Linear Systems Word Problems

Date_____

1) Kristin's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 6 senior citizen tickets and 13 child tickets for a total of $207. The school took in $171 on the second day by selling 3 senior citizen tickets and 14 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

2) When you reverse the digits in a certain two-digit number you increase its value by 54. What is the number if the sum of its digits is 10?

3) The senior classes at High School A and High School B planned separate trips to the state fair. The senior class at High School A rented and filled 12 vans and 6 buses with 522 students. High School B rented and filled 14 vans and 12 buses with 904 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

4) A boat traveled 210 miles downstream and back. The trip downstream took 10 hours. The trip back took 210 hours. What is the speed of the boat in still water? What is the speed of the current?

5) Norachai and Shreya are selling cheesecakes for a school fundraiser. Customers can buy French silk cheesecakes and chocolate marble cheesecakes. Norachai sold 7 French silk cheesecakes and 5 chocolate marble cheesecakes for a total of $144. Shreya sold 1 French silk cheesecake and 9 chocolate marble cheesecakes for a total of $120. What is the cost each of one French silk cheesecake and one chocolate marble cheesecake?

6) Elisa and Willie are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of gingerbread cookie dough. Elisa sold 9 packages of sugar cookie dough and 2 packages of gingerbread cookie dough for a total of $126. Willie sold 4 packages of sugar cookie dough and 8 packages of gingerbread cookie dough for a total of $184. What is the cost each of one package of sugar cookie dough and one package of gingerbread cookie dough?

7) Krystal and Mark each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Krystal spent $58 on 7 rose bushes and 3 geraniums. Mark spent $66 on 14 rose bushes and 1 geranium. What is the cost of one rose bush and the cost of one geranium?

8) When you reverse the digits in a certain two-digit number you increase its value by 18. What is the number if the sum of its digits is 14?

9) The water park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 12 vans and 8 buses with 528 students. High School B rented and filled 3 vans and 3 buses with 174 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

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13) Lisa and Jessica each improved their yards by planting hostas and geraniums. They bought their supplies from the same store. Lisa spent $110 on 10 hostas and 9 geraniums. Jessica spent $56 on 3 hostas and 5 geraniums. What is the cost of one hosta and the cost of one geranium?

14) A plane traveled 960 miles to Casablanca and back. The trip there was with the wind. It took 10 hours. The trip back was into the wind. The trip back took 24 hours. Find the speed of the plane in still air and the speed of the wind.

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16) Scott and Jose are selling cheesecakes for a school fundraiser. Customers can buy New York style cheesecakes and strawberry cheesecakes. Scott sold 7 New York style cheesecakes and 4 strawberry cheesecakes for a total of $110. Jose sold 5 New York style cheesecakes and 7 strawberry cheesecakes for a total of $120. Find the cost each of one New York style cheesecake and one strawberry cheesecake.

17) Daniel and Lisa each improved their yards by planting grass sod and ornamental grass. They bought their supplies from the same store. Daniel spent $198 on 15 ft² of grass sod and 14 bunches of ornamental grass. Lisa spent $172 on 14 ft² of grass sod and 12 bunches of ornamental grass. What is the cost of one ft² of grass sod and the cost of one bunch of ornamental grass?

18) Micaela's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 6 senior citizen tickets and 4 student tickets for a total of $114. The school took in $236 on the second day by selling 16 senior citizen tickets and 5 student tickets. Find the price of a senior citizen ticket and the price of a student ticket.

19) Jennifer and DeShawn are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of double chocolate cookie dough. Jennifer sold 4 packages of sugar cookie dough and 11 packages of double chocolate cookie dough for a total of $182. DeShawn sold 3 packages of sugar cookie dough and 14 packages of double chocolate cookie dough for a total of $217. Find the cost each of one package of sugar cookie dough and one package of double chocolate cookie dough.

20) Lisa's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 10 senior citizen tickets and 6 child tickets for a total of $96. The school took in $192 on the second day by selling 9 senior citizen tickets and 15 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

Linear Systems Word Problems

1) Kristin's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 6 senior citizen tickets and 13 child tickets for a total of $207. The school took in $171 on the second day by selling 3 senior citizen tickets and 14 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

   senior citizen ticket: $15, child ticket: $9

2) When you reverse the digits in a certain two-digit number you increase its value by 54. What is the number if the sum of its digits is 10?

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3) The senior classes at High School A and High School B planned separate trips to the state fair. The senior class at High School A rented and filled 12 vans and 6 buses with 522 students. High School B rented and filled 14 vans and 12 buses with 904 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

   Van: 14, Bus: 59

4) A boat traveled 210 miles downstream and back. The trip downstream took 10 hours. The trip back took 210 hours. What is the speed of the boat in still water? What is the speed of the current?

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   French silk cheesecake: $12, chocolate marble cheesecake: $12

6) Elisa and Willie are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of gingerbread cookie dough. Elisa sold 9 packages of sugar cookie dough and 2 packages of gingerbread cookie dough for a total of $126. Willie sold 4 packages of sugar cookie dough and 8 packages of gingerbread cookie dough for a total of $184. What is the cost each of one package of sugar cookie dough and one package of gingerbread cookie dough?

   package of sugar cookie dough: $10, package of gingerbread cookie dough: $18

7) Krystal and Mark each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Krystal spent $58 on 7 rose bushes and 3 geraniums. Mark spent $66 on 14 rose bushes and 1 geranium. What is the cost of one rose bush and the cost of one geranium?

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9) The water park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 12 vans and 8 buses with 528 students. High School B rented and filled 3 vans and 3 buses with 174 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

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package of sugar cookie dough: $7, package of double chocolate cookie dough: $14

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Grade 10 Academic Math   Name_____

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Linear Systems Word Problems

1) Kristin's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 6 senior citizen tickets and 13 child tickets for a total of $207. The school took in $171 on the second day by selling 3 senior citizen tickets and 14 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

senior citizen ticket: $15, child ticket: $9

2) When you reverse the digits in a certain two-digit number you increase its value by 54. What is the number if the sum of its digits is 10?

28

3) The senior classes at High School A and High School B planned separate trips to the state fair. The senior class at High School A rented and filled 12 vans and 6 buses with 522 students. High School B rented and filled 14 vans and 12 buses with 904 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

Van: 14, Bus: 59

4) A boat traveled 210 miles downstream and back. The trip downstream took 10 hours. The trip back took 210 hours. What is the speed of the boat in still water? What is the speed of the current?

boat: 11 mph, current: 10 mph

5) Norachai and Shreya are selling cheesecakes for a school fundraiser. Customers can buy French silk cheesecakes and chocolate marble cheesecakes. Norachai sold 7 French silk cheesecakes and 5 chocolate marble cheesecakes for a total of $144. Shreya sold 1 French silk cheesecake and 9 chocolate marble cheesecakes for a total of $120. What is the cost each of one French silk cheesecake and one chocolate marble cheesecake?

French silk cheesecake: $12, chocolate marble cheesecake: $12

6) Elisa and Willie are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of gingerbread cookie dough. Elisa sold 9 packages of sugar cookie dough and 2 packages of gingerbread cookie dough for a total of $126. Willie sold 4 packages of sugar cookie dough and 8 packages of gingerbread cookie dough for a total of $184. What is the cost each of one package of sugar cookie dough and one package of gingerbread cookie dough?

package of sugar cookie dough: $10, package of gingerbread cookie dough: $18

7) Krystal and Mark each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Krystal spent $58 on 7 rose bushes and 3 geraniums. Mark spent $66 on 14 rose bushes and 1 geranium. What is the cost of one rose bush and the cost of one geranium?

rose bush: $4, geranium: $10

8) When you reverse the digits in a certain two-digit number you increase its value by 18. What is the number if the sum of its digits is 14?

68

9) The water park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 12 vans and 8 buses with 528 students. High School B rented and filled 3 vans and 3 buses with 174 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

Van: 16, Bus: 42

10) When you reverse the digits in a certain two-digit number you decrease its value by 18. What is the number if the sum of its digits is 6?

42

11) A boat traveled 88 miles downstream and back. The trip downstream took 4 hours. The trip back took 22 hours. Find the speed of the boat in still water and the speed of the current.

boat: 13 mph, current: 9 mph

12) The indoor climbing gym is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 3 vans and 8 buses with 384 students. High School B rented and filled 13 vans and 5 buses with 418 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

Van: 16, Bus: 42

13) Lisa and Jessica each improved their yards by planting hostas and geraniums. They bought their supplies from the same store. Lisa spent $110 on 10 hostas and 9 geraniums. Jessica spent $56 on 3 hostas and 5 geraniums. What is the cost of one hosta and the cost of one geranium?

hosta: $2, geranium: $10

14) A plane traveled 960 miles to Casablanca and back. The trip there was with the wind. It took 10 hours. The trip back was into the wind. The trip back took 24 hours. Find the speed of the plane in still air and the speed of the wind.

plane: 68 mph, wind: 28 mph

15) Heather and Ryan each improved their yards by planting rose bushes and shrubs. They bought their supplies from the same store. Heather spent $260 on 13 rose bushes and 13 shrubs. Ryan spent $292 on 15 rose bushes and 14 shrubs. What is the cost of one rose bush and the cost of one shrub?

rose bush: $12, shrub: $8

16) Scott and Jose are selling cheesecakes for a school fundraiser. Customers can buy New York style cheesecakes and strawberry cheesecakes. Scott sold 7 New York style cheesecakes and 4 strawberry cheesecakes for a total of $110. Jose sold 5 New York style cheesecakes and 7 strawberry cheesecakes for a total of $120. Find the cost each of one New York style cheesecake and one strawberry cheesecake.

New York style cheesecake: $10, strawberry cheesecake: $10

17) Daniel and Lisa each improved their yards by planting grass sod and ornamental grass. They bought their supplies from the same store. Daniel spent $198 on 15 ft² of grass sod and 14 bunches of ornamental grass. Lisa spent $172 on 14 ft² of grass sod and 12 bunches of ornamental grass. What is the cost of one ft² of grass sod and the cost of one bunch of ornamental grass?

ft² of grass sod: $2, bunch of ornamental grass: $12

18) Micaela's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 6 senior citizen tickets and 4 student tickets for a total of $114. The school took in $236 on the second day by selling 16 senior citizen tickets and 5 student tickets. Find the price of a senior citizen ticket and the price of a student ticket.

senior citizen ticket: $11, student ticket: $12

19) Jennifer and DeShawn are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of double chocolate cookie dough. Jennifer sold 4 packages of sugar cookie dough and 11 packages of double chocolate cookie dough for a total of $182. DeShawn sold 3 packages of sugar cookie dough and 14 packages of double chocolate cookie dough for a total of $217. Find the cost each of one package of sugar cookie dough and one package of double chocolate cookie dough.

package of sugar cookie dough: $7, package of double chocolate cookie dough: $14

20) Lisa's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 10 senior citizen tickets and 6 child tickets for a total of $96. The school took in $192 on the second day by selling 9 senior citizen tickets and 15 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

senior citizen ticket: $3, child ticket: $11