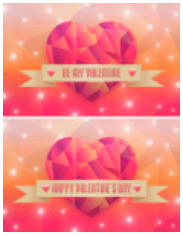
Valentine's Day Word Problems (A)

Name: _____ Date: _____

Solve each problem in the space provided.

1. Callum and his dad bought two packages of Valentine's Day cards, so he could give them to everyone in his class. One package was $4.50 and the other package was $4.25. The 12% sales tax came out to $1.05. Callum paid with a $10 bill. How much change did he get?



2. Ivy and her brother, Hayden, each got a box of chocolates for Valentine's Day. Her box contained 12 chocolates, and his box contained 10 chocolates. They both knew that their dad loved chocolate, so they each gave him half of their chocolates. Also, they each gave their mother two chocolates; then they ate the rest. If each chocolate contained 80 calories, how many calories did Ivy, Hayden, their dad and their mum eat?

Images from OpenClipart.org

Valentine's Day Word Problems (A) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

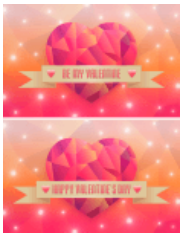
1. Callum and his dad bought two packages of Valentine's Day cards, so he could give them to everyone in his class. One package was \$4.50 and the other package was \$4.25. The 12% sales tax came out to \$1.05. Callum paid with a \$10 bill. How much change did he get?

$\$10.00 - (\$4.50 + \$4.25 + \$1.05)$

$= \$10.00 - \$9.80$

$= \$0.20$

Callum got \$0.20 (20 cents) change.



2. Ivy and her brother, Hayden, each got a box of chocolates for Valentine's Day. Her box contained 12 chocolates, and his box contained 10 chocolates. They both knew that their dad loved chocolate, so they each gave him half of their chocolates. Also, they each gave their mother two chocolates; then they ate the rest. If each chocolate contained 80 calories, how many calories did Ivy, Hayden, their dad and their mum eat?

Ivy: $(12 - 6 - 2) \times 80 = 320$ calories

Hayden: $(10 - 5 - 2) \times 80 = 240$ calories

Dad: $(6 + 5) * 80 = 880$ calories

Mother: $2 \times 2 \times 80 = 320$ calories

Images from OpenClipart.org

Valentine's Day Word Problems (B)

Name: _____ Date: _____

Solve each problem in the space provided.

3. In science class, Lauren found out that her vital lung capacity (how much air she could push out in one breath) should be about 3.2 liters for her age. When she tested it, she found that it was actually 3.1 liters. For the Valentine's Day dance, she had to blow up 25 balloons that each held 5.7 liters of gas. In order to blow up all the balloons, how many breaths did she have to blow into balloons?

4. Valentine's Day morning in Chicago was a cold 10°F. By lunch, it had gone up 4°F. By supper, it had gone up a further 2°F. After supper, it had gone down 3°F. At bedtime, it had gone down a further 7°F. Overnight, the temperature dropped another 12°F. What was the temperature in the morning on the day after Valentine's Day?

Images from OpenClipart.org

Valentine's Day Word Problems (B) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

3. In science class, Lauren found out that her vital lung capacity (how much air she could push out in one breath) should be about 3.2 liters for her age. When she tested it, she found that it was actually 3.1 liters. For the Valentine's Day dance, she had to blow up 25 balloons that each held 5.7 liters of gas. In order to blow up all the balloons, how many breaths did she have to blow into balloons?

Lauren could blow up a balloon with two breaths since $2 \times 3.1 > 5.7$. It would take $2 \times 25 = 50$ breaths to blow up the 25 balloons.
If Lauren used partial breaths, she could potentially fill up one balloon then use the remaining air to start the next balloon. In that case, she would need $5.7 \times 25 = 142.5$ liters of air which would be $142.5 \div 3.1 = 45.97$ or about 46 breaths.

4. Valentine's Day morning in Chicago was a cold 10°F. By lunch, it had gone up 4°F. By supper, it had gone up a further 2°F. After supper, it had gone down 3°F. At bedtime, it had gone down a further 7°F. Overnight, the temperature dropped another 12°F. What was the temperature in the morning on the day after Valentine's Day?

$10 + 4 + 2 - 3 - 7 - 12 = -6$°F
It was -6°F the morning after Valentine's Day.

Images from OpenClipart.org

Valentine's Day Word Problems (C)

Name: _____ Date: _____

Solve each problem in the space provided.

5. Avery's grandmother always sent him a Valentine's Day card with a $25 gift card in it. This year, the gift card was for Subway. Yes! Over the next few weeks, Avery ate at Subway three times. Twice, he got the same thing and the total bill came out to $8.75 each time. On the third occasion, he splurged a bit and paid $12.50 for his meal. How much did he have to pay after his gift card ran out?

6. Peyton's sixth grade class was selling candy grams for a fund raiser on Valentine's Day. Students could buy candy grams and have them sent to another person in the school for 50 cents each. Each candy gram included 5 wrapped chocolate hearts and a heart-shaped paper to write who the candy gram was for and who it was from and a custom note if desired. They went through 1880 chocolate hearts which cost them $54 to buy. The paper was supplied for free by the school. How much money did Peyton's class make?

Images from OpenClipart.org

Valentine's Day Word Problems (C) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

5. Avery's grandmother always sent him a Valentine's Day card with a $25 gift card in it. This year, the gift card was for Subway. Yes! Over the next few weeks, Avery ate at Subway three times. Twice, he got the same thing and the total bill came out to $8.75 each time. On the third occasion, he splurged a bit and paid $12.50 for his meal. How much did he have to pay after his gift card ran out?

$\$25 - 2(\$8.75) - \$12.50 = -\$5.00$

He needed to pay $5 after his gift card ran out.

6. Peyton's sixth grade class was selling candy grams for a fund raiser on Valentine's Day. Students could buy candy grams and have them sent to another person in the school for 50 cents each. Each candy gram included 5 wrapped chocolate hearts and a heart-shaped paper to write who the candy gram was for and who it was from and a custom note if desired. They went through 1880 chocolate hearts which cost them $54 to buy. The paper was supplied for free by the school. How much money did Peyton's class make?

$1880 \div 5 = 376$ candy grams

$376 \times \$0.50 = \$188.00$ collected

$\$188 - \$54 = \$134$ profit

Peyton's class made $134 on the candy grams.

Images from OpenClipart.org

Valentine's Day Word Problems (D)

Name: _____ Date: _____

Solve each problem in the space provided.

7. Everyone in Elias's class of 22 students got a Valentine from every other student. No one gave themself a Valentine. How many Valentines were given out?

8. Gabriella arranged her Valentine's candy hearts by color. She found that there were 6 different colors. There were two fewer purple candy hearts than there were red hearts. There were six more green hearts than orange hearts. There was an equal number of purple, green and white hearts, and the white hearts beat out the yellow hearts by 15. If there were 281 candy hearts all together, how many purple, red, green, orange, white and yellow hearts were there?

Images from OpenClipart.org

Valentine's Day Word Problems (D) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

7. Everyone in Elias's class of 22 students got a Valentine from every other student. No one gave themself a Valentine. How many Valentines were given out?

Each student got 21 Valentines, so
22 students $\times$ 21 Valentines per student $=$ 462 Valentines were given out.

8. Gabriella arranged her Valentine's candy hearts by color. She found that there were 6 different colors. There were two fewer purple candy hearts than there were red hearts. There were six more green hearts than orange hearts. There was an equal number of purple, green and white hearts, and the white hearts beat out the yellow hearts by 15. If there were 281 candy hearts all together, how many purple, red, green, orange, white and yellow hearts were there?

$p = g = w$
$r = p + 2$
$o = p - 6$
$y = p - 15$
$3p + p + 2 + p - 6 + p - 15 = 281$
$p = 50$
Substitute for the rest. There were 50 purple, 50 green, 50 white, 52 red, 44 orange and 35 yellow candy hearts.

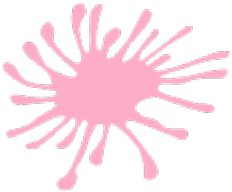
Images from OpenClipart.org

Valentine's Day Word Problems (E)

Name: _____ Date: _____

Solve each problem in the space provided.

9. For Valentine's Day, Ryker wanted to paint his room's walls and ceiling pink. The hardware store needed a measurement of the surface area to make sure he had enough paint. He measured the rectangular floor to be 12 ft by 11 ft and the distance from the floor to the ceiling to be 8 ft. He also measured the closet door, the room door and the window as he was not going to paint them. In order, they were 3 ft by 6 ft, 42 inches by 84 inches, and 60 inches by 30 inches. Assuming his room was a rectangular prism, what surface area did he report to the hardware store?



10. Valentine's was quickly approaching, so Cupid asked his mother, Venus for some material to make his arrows. For each arrow, he needed a 15 inch piece of ethereal elm, 25 inches of celestial string, and one vaporous arrowhead. How much of each material did he need to make 50 arrows?

Images from OpenClipart.org

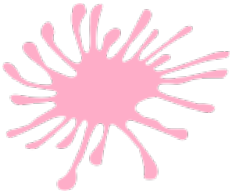
Valentine's Day Word Problems (E) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

9. For Valentine's Day, Ryker wanted to paint his room's walls and ceiling pink. The hardware store needed a measurement of the surface area to make sure he had enough paint. He measured the rectangular floor to be 12 ft by 11 ft and the distance from the floor to the ceiling to be 8 ft. He also measured the closet door, the room door and the window as he was not going to paint them. In order, they were 3 ft by 6 ft, 42 inches by 84 inches, and 60 inches by 30 inches. Assuming his room was a rectangular prism, what surface area did he report to the hardware store?

Walls and Ceiling:
$2 \times 8 \times 11 = \underline{88}$ ft^2; $2 \times 8 \times 12 = \underline{96}$ ft^2; $11 \times 12 = \underline{132}$ ft^2;
Doors and Window:
$3 \times 6 = \underline{18}$ ft^2; $3.5 \times 7 = \underline{24.5}$ ft^2; $5 \times 2.5 = \underline{12.5}$ ft^2;
Surface area $= 88 + 96 + 132 - 18 - 24.5 - 12.5 = 261$ ft^2
Ryker told the hardware store, he had 261 ft^2 to paint.



10. Valentine's was quickly approaching, so Cupid asked his mother, Venus for some material to make his arrows. For each arrow, he needed a 15 inch piece of ethereal elm, 25 inches of celestial string, and one vaporous arrowhead. How much of each material did he need to make 50 arrows?

Ethereal Elm: $15 \times 50 = 750$ in $= 62.5$ ft
Celestial String:
$25 \times 50 = 1250$ in $= 104$ ft 2 in
Vaporous Arrowheads: $1 \times 50 = 50$ arrowheads
Cupid needed 62.5 feet of ethereal elm, 104 feet plus 2 inches of celestial string and 50 vaporous arrowheads to make his 50 arrows.

Images from OpenClipart.org

Valentine's Day Word Problems (F)

Name: _____ Date: _____

Solve each problem in the space provided.

11. Alex was baking heart shaped cakes for the Valentine's Day bake sale. Each cake required 1 cup of sugar, 1/2 a cup of butter, 2 eggs, 2 teaspoons of vanilla, 1.5 cups of flour, 1 3/4 teaspoons baking powder and 1/2 a cup of milk. How much of each ingredient would Alex require to make 15 cakes?

12. Piper refused to eat sugar, so she used her Valentine's Day money to help the food bank instead. Each year, she donated cash equivalent to how much she figured she would have spent on Valentine's Day to help the food bank. She recorded the following donations in the past 12 years: $32, $32, $34, $36, $37, $28, $38, $50, $52, $50, $25, and $30. What was her average donation in the past 12 years? What was her median donation? What was the most common donation (the mode)?

Images from OpenClipart.org

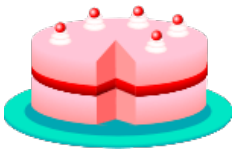
Valentine's Day Word Problems (F) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

11. Alex was baking heart shaped cakes for the Valentine's Day bake sale. Each cake required 1 cup of sugar, 1/2 a cup of butter, 2 eggs, 2 teaspoons of vanilla, 1.5 cups of flour, 1 3/4 teaspoons baking powder and 1/2 a cup of milk. How much of each ingredient would Alex require to make 15 cakes?

Sugar: $1 \times 15 = 15$ cups
Butter: $\frac{1}{2} \times 15 = \frac{15}{2} = 7\frac{1}{2}$ cups
Eggs: $2 \times 15 = 30$ eggs (or $2\frac{1}{2}$ dozen)
Vanilla: $2 \times 15 = 30$ tsp
Flour: $1.5 \times 15 = 22.5$ cups
Baking Powder: $1\frac{3}{4} \times 15 = \frac{7}{4} \times 15 = \frac{105}{4} = 26\frac{1}{4}$ tsp
Milk: $\frac{1}{2} \times 15 = \frac{15}{2} = 7\frac{1}{2}$ cups



12. Piper refused to eat sugar, so she used her Valentine's Day money to help the food bank instead. Each year, she donated cash equivalent to how much she figured she would have spent on Valentine's Day to help the food bank. She recorded the following donations in the past 12 years: \$32, \$32, \$34, \$36, \$37, \$28, \$38, \$50, \$52, \$50, \$25, and \$30. What was her average donation in the past 12 years? What was her median donation? What was the most common donation (the mode)?

In order: \$25, \$28, \$30, \$32, \$32, \$34, \$36, \$37, \$38, \$50, \$50, \$52.
Sum = \$444
Mean = $\$444 \div 12 = \$37$
Median = $(\$34 + \$36) \div 2 = \$35$
Mode: \$32 and \$50 (bimodal)

Images from OpenClipart.org

Valentine's Day Word Problems (G)

Name: _____ Date: _____

Solve each problem in the space provided.

13. On Valentine's day, 80% of the boys and 60% of the girls wore either pink or red. There were 250 students in the school and 54% were girls. How many boys and how many girls wore pink or red on Valentine's Day? What percentage of the students wore pink or red?

14. Sienna was scheduled to perform Rachmaninoff's Piano Concerto No. 2 at the Valentine's Day concert. In order to learn and practice the piece, she spent two hours a day at the piano every day in January and the first 13 days of February. In the end, she played it perfectly, got a standing ovation and received a bouquet of flowers. How many minutes did she spend learning and practicing the piece?

Images from OpenClipart.org

Valentine's Day Word Problems (G) Answers

Name: _____ Date: _____

Solve each problem in the space provided.

13. On Valentine's day, 80% of the boys and 60% of the girls wore either pink or red. There were 250 students in the school and 54% were girls. How many boys and how many girls wore pink or red on Valentine's Day? What percentage of the students wore pink or red?

Boys: $250 \times 0.46 = 115$
Girls: $250 \times 0.54 = 135$
Boys in pink or red: $115 \times 0.80 = 92$
Girls in pink or red: $135 \times 0.60 = 81$
% Students in pink or red:
$(92 + 81) \div 250 \times 100 = 69.2\%$
92 boys and 81 girls (or 69.2% of students) wore pink or red on Valentine's Day.

14. Sienna was scheduled to perform Rachmaninoff's Piano Concerto No. 2 at the Valentine's Day concert. In order to learn and practice the piece, she spent two hours a day at the piano every day in January and the first 13 days of February. In the end, she played it perfectly, got a standing ovation and received a bouquet of flowers. How many minutes did she spend learning and practicing the piece?

31 days in January plus 13 days in February is 44 days of practice. 44×2 hours per day $= 88$ hours.
88 hours is $88 \times 60 = 5280$ minutes.
Sienna spent 5280 minutes learning and practicing the piece.

Images from OpenClipart.org