

Lesson 8.1-8.2
Quiz - Form A

Unit 8

Solve for x:

1. $\frac{3}{8} = \frac{x}{16}$

2. $\frac{x}{4} = \frac{x+9}{16}$

3. $\frac{x}{20} = \frac{5}{x}$

4. $\frac{2}{3x} = \frac{1}{8}$

5. $\frac{3}{2x} = \frac{2}{5x} + \frac{1}{10}$

Write an equation and solve each problem:

6. Mike had an archery score 3 times Bill's score. Together they scored 320. Find their archery scores.
7. Six less than $\frac{2}{3}$ Beth's birth weight is 5 less than $\frac{1}{2}$ her birth weight. Find Beth's birth weight.

Lesson 8.1-8.2
Quiz - Form B

Unit 8

Solve each equation:

1. $\frac{1}{8} = \frac{2y}{3}$

2. $\frac{1}{10} + \frac{2}{5}d = \frac{3}{2}d$

3. $\frac{3}{5} = \frac{5}{9}d$

4. $\frac{1}{6} = \frac{x}{36}$

5. $\frac{x}{3} = \frac{x+9}{6}$

Write an equation and solve each problem:

6. Bob had an archery score 4 times Fred's score. Together they scored 325. Find their archery scores.
7. One more than $\frac{3}{4}$ Marlin's birth weight is $\frac{3}{2}$ more than $\frac{2}{3}$ his birth weight. Find Marlin's birth weight.

Lesson 8.3-8.4
Quiz - Form A

Unit 8

Solve each equation; give decimal answers correct to two places.

1. $0.09 - 5.1 = 1.5 - 0.24x$

2. $17.22 - 0.05y = -0.1[-0.7y + 0.2(19.0 - 2.0y)]$

Write an equation and solve each problem:

3. 39 percent of what number is 83?

4. 73 is what percent of 219?

5. Bob has 25 nickels and 11 dimes. What percent of the coins are nickels?

Lesson 8.3-8.4
Quiz - Form B

Unit 8

Solve each equation:

1. $4.5 - 0.24x = 0.09 - 4.1$
2. $0.2[-0.7y + 0.2(0.1 - 2.0y)] = 10.08y - 3.821$

Write an equation and solve each problem:

3. 23 is 56 percent of what number?
4. What percent of 107.2 is 67?
5. Bob has 11 nickels and 25 dimes. What percent of the coins are nickels?

Lesson 8.5-8.6
Quiz - Form A

Unit 8

Solve:

1. $\frac{2}{x^2 - 2x - 3} = \frac{2}{x + 1} + \frac{3}{x - 3}$

2. $\frac{3}{a - 2} - \frac{2}{a^2 + 2a - 8} = \frac{1}{a + 4}$

3. $\frac{x - 1}{x + 2} = \frac{9}{x^2 - 3x - 10} - \frac{3}{x - 5}$

4. It takes Tina 3 hours to clean up her apartment. It takes Gina 6 hours to do the same job. If they work together, how long will it take?
5. Working together, Bill and Scott can paint a house in 8 hours. It would take Bill 20 hours to do it alone. How long would it take Scott to do it alone?

Lesson 8.5-8.6
Quiz - Form B

Unit 8

Solve:

1. $\frac{2}{x+5} + \frac{6}{x^2 + 3x - 10} = \frac{4}{x-2}$

2. $\frac{1}{x+1} = \frac{2}{2x^2 + 3x + 1} - \frac{1}{2x+1}$

3. $\frac{x-1}{x+1} - \frac{4}{x^2-1} = \frac{2}{x-1}$

4. It takes Silvia 3 hours to scrub the floor. Tricia can do it in 2 hours. If they work together, how long will it take?
5. Working together, Dee and Howard can weed the garden in 14 minutes. It takes Dee $\frac{1}{2}$ hour to do it alone. How long would it take Howard to do it alone?

Lesson 8.7-8.8
Quiz - Form A

Unit 8

Solve for x:

1. $dx + 7d = 2a$

2. $\frac{x}{5a} = \frac{5}{3k}$

3. $9cx = 3s - 66x + sx$

4. John started out on his bike at a rate of 30 mph. Two hours later, Jim left the same point riding along the same road at 40 mph. How long will it take Jim to catch up to John?

5. Two trains traveled in opposite directions from the same starting point. The rate of one train was 30 mph faster than the rate of the other train. After 3 hours, the trains were 450 miles apart. Find each train's rate if they started at the same time.

Lesson 8.7-8.8
Quiz - Form B

Unit 8

Solve for x:

1. $ab + xc = 3d$

2. $\frac{c}{2k + 1} = \frac{x}{k + 1}$

3. $3p + 5sx + bx = 3sx - kx$

4. Mike and Jim started from the same point and rode in opposite directions. Mike rode 5 mph faster than Jim. After 3 hours, they were 69 miles apart. Find the rate of each boy.

5. It took Mike the same time to drive 200 miles as it took Chip to drive 160 miles. Chip's speed was 10 mph less than Mike's. How fast did Mike drive?

Solve for the variable:

1. $\frac{m}{2x} = \frac{3}{2c}$ [Solve for x.]
2. $5 + 3x = kx$ [Solve for x.]
3. $\frac{1}{8} = \frac{2}{3}y$
4. $\frac{1}{8}d - 3 = \frac{1}{4}d + 2$
5. $\frac{2}{5}d + \frac{1}{10} = \frac{3}{2}d$
6. $0.5x = 1.2 + 6.5$
7. $0.5t + 0.02 = -0.6t - 0.2$
8. $-0.02b + 0.41 = 0.5(0.784b - 23.9)$
9. $97.541 - 0.01(0.02 + 3a) = 7.9a$

Write an equation and solve each problem:

10. 29 percent of 78 is what number?
11. 21 is what percent of 321?
12. 76 percent of what number is 138?
13. 38 percent of what number is 61?
14. A basketball team won 9 games and lost 3. What percent of the games did they win?

Simplify:

15. $\frac{\frac{2}{a} + \frac{4}{a^2}}{\frac{3}{2a} + \frac{1}{3a^2}}$

Simplify:

16.
$$\frac{\frac{2}{x} + \frac{1}{x^2} + 5}{\frac{3}{x} - \frac{4}{2x^2}}$$

Write an equation and solve each problem:

17. Bob's salary, increased by \$300, is the same as twice his salary. Find Bob's salary.
18. The sum of 5 and a number, multiplied by 7, is the same as 4 less than 20 times the number. Find the number.
19. Separate 51 peaches into two groups so that the first group has 5 less than 3 times the number of peaches in the second group.
20. The third side of a triangle is triple the first. The second side is half the third. The perimeter is 44. Find each side.

Solve for x:

21. $5ax + 6b = 4cx - 5a + 3x$

Solve each problem:

22. Together, Dick and Larry can paint a house in 6 days. It would take Dick 2 times as long as Larry to do it alone. How long would it take each to do it alone?
23. To do a job alone, it would take Adam 2 hours, Carol 4 hours, and Tim 6 hours. How long would it take if they all work together?
24. Two cars traveled in opposite directions from the same starting point. The rate of one car is 15 mph faster than the rate of the other. After 3 hours, the cars were 345 miles apart. Find each car's rate if they left at the same time.
25. A train left a station traveling 50 mph. One hour later, a car traveling 75 mph left the same station following the train. After how many hours did the car catch the train?

Solve for the variable:

1. $\frac{c}{x} = \frac{2y}{x} - d$ [Solve for x.]

2. $px - n = ax$ [Solve for x.]

3. $\frac{3}{5}z = \frac{1}{8}$

4. $2 + \frac{1}{4}d = -3 + \frac{1}{8}d$

5. $\frac{3}{2}y = \frac{2}{5}y + \frac{3}{10}$

6. $1.5 - 0.5x = -7.5$

7. $0.2 - 0.6t = -0.24 + 0.5t$

8. $-0.2(0.01 - 0.01b) - 0.31b = -0.064$

9. $-0.91 - 0.7x = -x - 0.04(0.2 - 2x)$

Write an equation and solve each problem:

10. 35 percent of 64 is what number?

11. 42 is what percent of 258?

12. 62 percent of what number is 240?

13. 24 percent of what number is 75?

14. A basketball team won 9 games and lost 3. What percent of the games did they win?

Simplify:

15. $\frac{\frac{5}{x} + \frac{3}{2}}{\frac{2}{x^2} - \frac{1}{3}}$

Simplify:

16.
$$\frac{\frac{3}{y} - \frac{2}{y^2} - 3}{\frac{1}{2y} + \frac{3}{2}}$$

Write an equation and solve each problem:

17. Joe's salary, decreased by \$800, is equal to one-third his salary. Find Joe's salary.
18. The sum of 5 and a number multiplied by 7, is the same as 4 less than 20 times the number. Find the number.
19. Separate 72 people into two groups so that the first group has 16 less than 3 times the number of people in the second group.
20. The third side of a triangle is double the first. The second side is three-quarters of the third. The perimeter is 54. Find each side.

Solve for x:

21. $3a - 5cx + 1 = 3x - 5d$

Solve each problem:

22. It takes Kim twice as long to do a job as Gary. How long would it take each of them to do it alone, if working together they can do it in 6 hours?
23. Working together, Jim and Skip can paint a house in 8 hours. It would take Skip 12 hours to do it alone. How long would it take Jim to do it alone?
24. A car left a house traveling 60 mph. Three hours later, a car left the same house on the same path as the first, traveling 80 mph. After how many hours will the second car catch the first?
25. A family drove to the game at 80 mph. They returned later in heavy traffic at 40 mph. It took 2 hours longer to return than it did to get to the game. How long did it take to get home?