

Solve each word problem using rational equations.

1. Mike can mow a lawn in 3 hours. Brenna needs 6 hours to do the same work. How long will it take them if they work together?
2. Steve can make and decorate a huge cake in 20 hours, working alone. Keith can do the same work in 30 hours. How long will it take Steve and Keith to complete the cake if they work together?
3. Phil can build a table in 6 hours. It takes Brandon 12 hours to build the same table. How long will it take the two working together to build the table?
4. Shelby can sew a quilt in 8 days, Christian in 5 days and Alyssa in 3 days. If all three work together, how long will it take them to do the work?
5. Anthony can type a paper in 10 hours. If Maggie helps him, they can type the complete paper in 6 hours. How long would it take Maggie if she did all of the typing herself?
6. Abby, Ashley and Tom can prepare ballots for West's school superlatives in 2 hours. If Abby could prepare them in 5 hours and Ashley in 6 hours, how long will it take Tom to prepare the ballots by himself?

Continued: Solve each word problem using rational equations.

7. Lauren can wash a car in 50 minutes. Mike can wash the same car in 30 minutes. Working at the same rate, how long would it take to wash the car if they work together?

8. If John and Ashley work together, they can clean the entire house in 3 hours. If a friend offers to help them, assuming the friend works at the same rate, in how many hours could all three of them clean the same house?

9. Ryan, Jen and Paul can sort ballots for West's student council in 2 hours. If it takes Jen 3 hours and Paul 8 hours, how long will it take Ryan to sort the ballots by himself?

10. The groceries in a home of 4 members are enough for 30 days. If a guest comes and stays with them, how many days will the same groceries last?

11. Dan and Angela can move 40 bales of hay in 2 hours. If Mark can work at the same rate and offers to help them, how long will it take them to move 60 more bales of hay?