

Direct Variation Word Problems

1. A taxi charges the same amount for every mile traveled. A 6-mile ride costs \$18.
 - a) Write an equation relating cost y to miles x .
 - b) Find the constant of variation.
 - c) How much would a 10-mile ride cost?
2. A machine fills bottles at a constant rate. In 4 minutes, it fills 28 bottles.
 - a) Write a direct variation equation.
 - b) Find the constant of variation.
 - c) How many bottles will it fill in 9 minutes?
3. A student earns money by washing cars. If 3 cars earn \$45, assume the amount earned varies directly with the number of cars washed.
 - a) Write the direct variation equation.
 - b) Find the constant of variation.
 - c) How much would the student earn for washing 8 cars?
4. The distance traveled by a bicyclist varies directly with time. The bicyclist travels 24 miles in 2 hours.
 - a) Write the equation relating distance y to time x .
 - b) Find the constant of variation.
 - c) How far will the bicyclist travel in 5 hours?
5. The total cost of notebooks varies directly with the number purchased. Five notebooks cost \$15.
 - a) Write the direct variation equation.
 - b) Find the constant of variation.
 - c) Find the cost of 12 notebooks.
6. A faucet fills buckets at a constant rate. In 3 minutes, it fills 21 gallons of water.
 - a) Write the direct variation equation.
 - b) Find the constant of variation.
 - c) How many gallons will the faucet fill in 8 minutes?
7. The amount of paint needed varies directly with the area being painted. If 2 gallons cover 600 square feet,
 - a) write an equation relating gallons y to square feet x .
 - b) Find the constant of variation.
 - c) How many gallons are needed for 1,200 square feet?

8. A printer charges the same price per flyer printed. Printing 200 flyers costs \$50.
- Write the direct variation equation.
 - Find the constant of variation.
 - What would 500 flyers cost?
9. The number of calories burned varies directly with the number of minutes exercised. A person burns 180 calories in 30 minutes.
- Write the equation relating calories y to minutes x .
 - Find the constant of variation.
 - How many calories will be burned in 50 minutes?
10. A delivery truck uses fuel at a constant rate. The truck uses 12 gallons of fuel to travel 240 miles.
- Write the direct variation equation relating gallons y to miles x .
 - Find the constant of variation.
 - How many gallons will be used to travel 400 miles?