

MORE PRACTICE: WORD PROBLEMS

Math 10 · Mr. Merrick · February 4, 2026

1. A coffee shop blends two types of beans. One bean costs \$9 per kg and the other costs \$15 per kg. How many kilograms of each should be mixed to make 80 kg of coffee that sells for \$12 per kg?
2. A delivery truck travels part of a trip at 70 km/h and the rest at 90 km/h. The total distance is 420 km and the total driving time is 5.5 hours. How long did the truck travel at each speed?

3. A lab technician mixes a 30% acid solution with a 70% acid solution to make 500 mL of a 54% solution. How much of each solution is used?

4. A student travels 9 km to school. She cycles part of the way at 12 km/h and walks the rest at 4 km/h. The total travel time is 1.25 hours. How far does she cycle?

5. A snack mix contains almonds, cashews, and peanuts. Almonds cost \$18 per kg, cashews \$14 per kg, and peanuts \$6 per kg. A total of 50 kg of mix is made and sold for \$12 per kg. There are twice as many kilograms of peanuts as almonds.

How many kilograms of each nut are used?

6. A road trip is made in three stages. The driver travels part of the trip at 50 km/h, part at 90 km/h, and part at 60 km/h. The total distance is 480 km and the total driving time is 7 hours. The time spent driving at 90 km/h is twice the time spent driving at 50 km/h.

How long is each stage of the trip?

7. A movie theatre sells adult, youth, and senior tickets. Adult tickets cost \$14, youth tickets \$10, and senior tickets \$9.

On one evening:

- 320 tickets were sold
- The total revenue was \$3760
- Twice as many adult tickets were sold as senior tickets

How many tickets of each type were sold?

8. A system of equations modelling a real situation has the solution

$$(x, y, z) = (12, 8, 4).$$

Explain what each value could represent in:

- a mixture problem
- a travel problem
- a ticket-sales problem

9. A fundraiser sells three types of items: mugs, T-shirts, and hoodies. Mugs sell for \$8 each, T-shirts for \$15 each, and hoodies for \$35 each.

At the end of the event:

- A total of 140 items were sold
- The total revenue was \$2620
- The number of T-shirts sold was 20 more than the number of mugs sold

How many of each item were sold?

10. A shipment of grain is made by mixing wheat, barley, and oats. Wheat costs \$320 per tonne, barley costs \$280 per tonne, and oats cost \$200 per tonne.

A total of 60 tonnes of grain is shipped with a total value of \$16,800. The mass of wheat is equal to the average of the masses of barley and oats.

How many tonnes of each grain are included in the shipment?