# Estimating decimal calculations

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

**1.** Estimate $28.75 + 9.9$ using whole numbers, then calculate it exactly. [2 marks]

$29+10=39$.

$28.75+9.90=38.65$.

**Answer:** Estimate 39; exact sum 38.65.

**2.** Estimate $12.04 - 3.87$, then calculate it exactly. [2 marks]

$12-4=8$.

$12.04-3.87=8.17$.

**Answer:** Estimate 8; exact answer 8.17.

**3.** Estimate the cost of 40 items at 2.99 dollars each. Then find the exact cost. [2 marks]

$3\times40=120$.

$2.99\times4\times10=11.96\times10=119.6$.

**Answer:** Estimate 120 dollars; exact cost 119.60 dollars.

**4.** Estimate $89.6 \div 20$, then calculate it exactly. [2 marks]

$90 \div 20 = 4.5$.

$89.6 \div 2 \div 10 = 44.8 \div 10 = 4.48$.

**Answer:** Estimate 4.5; exact answer 4.48.

**5.** A bottle holds 4.8 L. After 1.95 L is poured out, about how much remains? Then calculate the exact amount. [2 marks]

$5 - 2 = 3$ is a quick estimate.

$4.80 - 1.95 = 2.85$.

**Answer:** About 3 L; exactly 2.85 L.

**6.** A budget is 25 dollars. Two prices are 12.49 and 12.49 dollars. Is rounding both prices to 12 dollars enough to decide exactly how much money remains? Explain. [2 marks]

Rounding gives 24 dollars and would overstate the money left.

**Answer:** No. Calculate the exact total 24.98 dollars, leaving 0.02 dollars.