

Name _____

Date _____

4.2 Adding and subtracting decimals — worksheet

Add and subtract decimals, mentally and with a written method. · 56 questions · Show your working.

Remember

- In a written method, **line up the decimal points** — that lines up the place values.
- Fill any gaps with zeros: 10 becomes 10.00 before subtracting 4.83.
- **Mental method 1 — partition.** Add the whole-number parts and the decimal parts separately, then combine: $2.3 + 7.8 = (2 + 7) + (0.3 + 0.8) = 9 + 1.1 = 10.1$.
- **Mental method 2 — round and adjust.** $6.9 + 12.4 = 7 + 12.4 - 0.1 = 19.3$.
- For subtraction, round and adjust the other way: $13.3 - 5.8 = 13.3 - 6 + 0.2 = 7.5$.
- Decimal parts can carry into the units: $0.3 + 0.8 = 1.1$, not 0.11.
- Always estimate first — $2.3 + 7.8$ must be about 10.

A · Fluency — Add and subtract decimals.

- 1 Work out $2.3 + 7.8$

- 2 Work out $6.9 + 12.4$

- 3 Work out $4.5 + 3.7$

- 4 Work out $0.8 + 0.35$

- 5 Work out $15.6 + 2.45$

- 6 Work out $9.07 + 1.9$

- 7 Work out $3.25 + 4.75$

- 8 Work out $12.8 + 0.62$

- 9 Work out $0.9 + 0.9$

- 10 Work out $23.15 + 6.85$

- 11 Work out $5.4 + 11.06$

- 12 Work out $7.75 + 2.5$

13 Work out $13.3 - 5.8$

14 Work out $10 - 4.83$

15 Work out $20 - 12.83$

16 Work out $30 - 4.55$

17 Work out $40 - 16.782$

18 Work out $10 - 6.42$

19 Work out $8.4 - 2.65$

20 Work out $15.2 - 9.75$

21 Work out $7 - 0.35$

22 Work out $6.05 - 2.9$

23 Work out $12.5 - 3.75$

24 Work out $9.1 - 8.09$

B · Reasoning — Mental methods and missing numbers.

25 Work out $2.3 + 7.8$ by splitting into whole numbers and decimal parts. What is the answer?

26 Work out $6.9 + 12.4$ by rounding 6.9 up to 7 and adjusting. What is the answer?

27 Work out $13.3 - 5.8$ by rounding 5.8 up to 6 and adjusting.

28 When you add decimals in columns, what must you line up?

- ☐ The last digits
- ☐ The first digits
- ☐ The decimal points
- ☐ The longest numbers

29 Arun works out $10 - 4.83$ by writing 10 as 10.00. Why?

- ☐ To make it look longer
- ☐ So the columns line up and he can borrow
- ☐ Because 10 is not a decimal
- ☐ It makes no difference

- 30** Marcus works out $10 - 4.83$ as $10 - 4 = 6$, then $6 - 0.8 = 5.2$, then $5.2 - 0.03$. What is his final answer?

- 31** Work out $0.8 + 0.35$.

- 32** Work out $7 - 0.35$.

- 33** Is $0.3 + 0.8$ equal to 0.11 ?

☐ Yes

☐ No

- 34** Is $4.5 + 3.7$ equal to 8.2 ?

☐ Yes

☐ No

- 35** Find the missing number: $3.4 + ? = 9.1$

- 36** Find the missing number: $? - 2.6 = 4.85$

C · Challenge — Several steps and brackets.

- 37** Work out $4.75 + 3.6 - 2.85$.

- 38** Work out $20 - (6.4 + 3.85)$.

- 39** Work out $40 - 16.782$.

- 40** Three lengths are 1.8 m, 3.5 m and 2.45 m. What is the total, in metres?

- 41** Four pipes measure 1.8 m, 3.5 m, 2.45 m and 0.85 m. Jed needs 10 m in total. How much more pipe must he buy, in metres?

- 42** Work out $0.1 + 0.2 + 0.3 + 0.4$.

- 43** A number increased by 3.75 gives 10.2 . What is the number?

- 44** Work out $12.5 - 3.75 - 1.25$.

D · Word problems — Money, lengths and masses.

- 45** At the cinema Priya spends \$4.75 on a ticket, \$1.75 on sweets and \$0.85 on a drink. How much does she spend in total, in dollars?

- 46** Priya pays with a \$10 note. How much change does she receive, in dollars?

- 47** Jed has four lengths of pipe: 1.8 m, 3.5 m, 2.45 m and 0.85 m. What is the total length, in metres?

- 48** A bottle holds 1.5 litres. 0.65 litres are poured out. How much is left, in litres?

- 49** A parcel weighs 2.35 kg and another weighs 1.8 kg. What is the total mass, in kg?

- 50** A runner's two laps take 62.4 s and 58.75 s. What is the total time, in seconds?

- 51** A shop bill is \$23.40. You pay with \$50. How much change, in dollars?

- 52** A plank 2.4 m long has 0.85 m cut off. How much is left, in metres?

- 53** The temperature rises from 18.6 °C to 24.35 °C. By how many degrees did it rise?

- 54** A tank holds 30 litres. 4.55 litres are used. How much remains, in litres?

- 55** Three books cost \$8.99, \$12.50 and \$6.75. What is the total, in dollars?

- 56** A journey of 12.8 km is followed by one of 7.45 km. How far in total, in km?

