

Name _____

Date _____

4.4 Dividing decimals — worksheet

Divide decimals by whole numbers, rounding the answer to a given degree of accuracy where necessary. · 56 questions · Show your working.

Remember

- Set the division out so the decimal point in the answer sits **directly above** the point in the question.
- Then divide exactly as you would with whole numbers.
- If there is a remainder, **add zeros after the decimal point** and carry on: $7 = 7.00$, so $7 \div 4 = 1.75$.
- Some divisions never stop, such as $2 \div 3 = 0.6666\ldots$ — those must be rounded.
- When an answer must be rounded, work to **one more decimal place** than you need, then round.
- $8.46 \div 7 = 1.208\ldots$, so to 2 decimal places the answer is 1.21.
- Dividing by a whole number greater than 1 always makes the answer smaller.

A · Fluency — Divide decimals by whole numbers.

1 Work out $8.4 \div 4$

2 Work out $9.6 \div 3$

3 Work out $7.5 \div 5$

4 Work out $12.6 \div 6$

5 Work out $0.84 \div 4$

6 Work out $5.55 \div 5$

7 Work out $16.8 \div 8$

8 Work out $2.46 \div 2$

9 Work out $0.96 \div 3$

10 Work out $23.4 \div 9$

11 Work out $1.44 \div 4$

12 Work out $6.35 \div 5$

13 Work out $3.6 \div 8$

14 Work out $7 \div 4$

15 Work out $9 \div 8$

16 Work out $1.2 \div 5$

17 Work out $4.5 \div 8$

18 Work out $13 \div 4$

19 Work out $0.7 \div 4$

20 Work out $2.7 \div 6$

21 Work out $15 \div 8$

22 Work out $3.5 \div 4$

23 Work out $0.9 \div 8$

24 Work out $11 \div 5$

B · Reasoning — Adding zeros, and rounding a division.

25 When you divide a decimal by a whole number, where does the decimal point go in the answer?

- ☐ At the end
- ☐ Directly above the point in the question
- ☐ One place further right
- ☐ You decide at the end

26 Why can you write 7 as 7.000 when dividing by 4?

- ☐ To make it bigger
- ☐ Because adding zeros after the point does not change it
- ☐ Because 4 has one digit
- ☐ You cannot

27 Work out $7 \div 4$.

28 Work out $9 \div 8$.

29 Work out $8.46 \div 7$, giving your answer to 2 decimal places.

30 Work out $7.62 \div 5$, giving your answer to 1 decimal place.

31 Work out $9.428 \div 7$, giving your answer to 2 decimal places.

32 Work out $8.6 \div 13$, giving your answer to 3 decimal places.

33 Zara works a division out to 3 decimal places when she only needs 2. Why?

- ☐ To show off
- ☐ She needs the extra digit to decide how to round
- ☐ Because the answer has 3 places
- ☐ It is a rule for all divisions

34 Find the missing number: $? \div 6 = 2.5$

35 Find the missing number: $8.4 \div ? = 2.1$

36 Does dividing by a whole number bigger than 1 always make the answer smaller?

- ☐ Yes
- ☐ No

C · Challenge — Several steps and non-terminating answers.

37 Work out $12.6 \div 6 \div 7$.

38 Work out $(8.4 + 3.6) \div 8$.

39 Work out $100 \div 7$, giving your answer to 2 decimal places.

40 Work out $2 \div 3$, giving your answer to 3 decimal places.

41 A number divided by 8 gives 1.125. What is the number?

42 Work out $0.84 \div 4 \times 100$.

43 \$50 is shared equally between 3 people. How much each, to the nearest cent? Give the number of dollars.

44 A 12 m rope is cut into 7 equal pieces. How long is each, to 2 decimal places, in metres?

D · Word problems — Sharing money, lengths and masses.

- 45** Four friends share a bill of \$23.40 equally. How much does each pay, in dollars?

- 46** A 8.4 m plank is cut into 4 equal pieces. How long is each, in metres?

- 47** A 5.55 kg bag of flour is split equally into 5 tubs. How much in each, in kg?

- 48** A car travels 16.8 km using 8 litres of fuel. How far per litre, in km?

- 49** A 23.4 m roll of tape is cut into 9 equal strips. How long is each, in metres?

- 50** Six identical books weigh 12.6 kg. What is the mass of one, in kg?

- 51** A 3.6 m ribbon is shared between 8 people. How much each, in metres?

- 52** A journey of 100 km takes 7 hours. What is the average speed, to 2 decimal places, in km/h?

- 53** A 6.35 litre container is emptied into 5 equal jugs. How much in each, in litres?

- 54** Eight people share \$9 equally. How much each, in dollars?

- 55** A wall 2.46 m long is divided into 2 equal panels. How wide is each, in metres?

- 56** A 15 kg sack is split into 8 equal bags. How much in each, in kg?

