

Dividing a Whole Number by a Decimal

To divide a whole number by a decimal, multiply both numbers by a power of 10 to make the divisor a whole number.

Divide: $138 \div 0.04$

Multiply by 100 to make 0.04 a whole number. Remember to multiply 138 by 100, too.

$$0.04 \times 100 = 4$$

$$138 \times 100 = 13,800$$

Use long division to find the quotient:

$$\begin{array}{r} 3,450 \\ 4 \overline{)13,800} \\ \underline{12} \\ 18 \\ \underline{16} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

So, $138 \div 0.04 = 3,450$.

Use long division to find each quotient.

1. $0.3 \overline{)780}$ _____

2. $0.5 \overline{)406}$ _____

3. $0.02 \overline{)1140}$ _____

4. $0.06 \overline{)282}$ _____

5. $0.08 \overline{)312}$ _____

6. $0.04 \overline{)619}$ _____

Find each quotient.

7. $154 \div 0.7$ _____

8. $3510 \div 0.9$ _____

9. $228 \div 0.3$ _____

10. $467 \div 0.02$ _____

11. $106 \div 0.05$ _____

12. $581 \div 0.04$ _____

13. $3900 \div 0.08$ _____

14. $207 \div 0.03$ _____

15. $721 \div 0.25$ _____

16. A kitchen floor has an area of 48 square feet. One tile covers 0.75 square foot. How many tiles would be needed to cover the entire kitchen floor? _____

17. Mark says that to divide 58 by 0.65, you only need to multiply both numbers by 10 because that will give you a whole number. Jan says you need to multiply both numbers by 100. Who is correct and why?

Name _____

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Find each quotient. Show your work.

1. $0.7 \overline{)840}$ _____

2. $0.3 \overline{)1,230}$ _____

3. $0.05 \overline{)281}$ _____

4. $0.7 \overline{)287}$ _____

5. $0.6 \overline{)135}$ _____

6. $0.08 \overline{)280}$ _____

7. $4,530 \div 0.06$ _____

8. $315 \div 0.9$ _____

9. $516 \div 0.03$ _____

10. $827 \div 0.2$ _____

11. $45 \div 0.15$ _____

12. $1,233 \div 0.09$ _____

13. A 21-pound turkey was cooked for a small banquet. The caterer figures he will discard 5 pounds of bones and that each person will eat 0.8 pounds of the remaining turkey. How many people will the turkey serve?

14. During a regular half-hour TV show, there are 8 minutes of commercials. If each commercial is 0.25 minutes long, how many commercials will be shown during that show?

15. A machine in a deli cooks chickens by rotating them past a heat source. One rotation takes 1.75 minutes, and it takes 35 minutes to fully cook a chicken. How many rotations does it take to cook the chicken?

A 8

B 14

C 18

D 20

16. One pound of horsehair is divided into “pulls” to make horsehair belts. One “pull” weighs about 0.011 ounces. How many “pulls” could be made from 6 pounds of horsehair?

17. When you divide a whole number by a decimal less than 1, the quotient is greater than the whole number. Why?
