



Questions

1. $350 \div 7$

2. $144 \div 3$

3. $305 \div 5$

4. $66 \div 4$

5. $896 \div 8$

6. $30.75 \div 3$

7. $3171 \div 7$

8. $34 \div 3$

Answers

1. $350 \div 7$

Write the answer in the bus shelter format:

$$3 \div 7 = 0, \text{ remainder } 3$$
$$7 \overline{) 350}$$

$$35 \div 7 = 5, \text{ remainder } 0$$
$$7 \overline{) 350}$$

$$0 \div 7 = 0, \text{ remainder } 0$$
$$7 \overline{) 350}$$

$$0 \ 5 \ 0$$
$$7 \overline{) 350}$$

Therefore, $350 \div 7 = 0$.

2. $144 \div 3$ $1 \div 3 = 0$, remainder 1

$$\begin{array}{r} 3 \overline{) 144} \\ 0 \end{array}$$

 $14 \div 3 = 4$, remainder 2

$$\begin{array}{r} 3 \overline{) 144} \\ 12 \\ \hline 24 \\ 24 \\ \hline 0 \end{array}$$

 $24 \div 3 = 8$, remainder 0

$$\begin{array}{r} 3 \overline{) 144} \\ 12 \\ \hline 24 \\ 24 \\ \hline 0 \end{array}$$

Therefore, $144 \div 3 = 48$.3. $305 \div 5$ $3 \div 5 = 0$, remainder 3

$$\begin{array}{r} 5 \overline{) 305} \\ 0 \end{array}$$

 $30 \div 5 = 6$, remainder 0

$$\begin{array}{r} 5 \overline{) 305} \\ 30 \\ \hline 5 \\ 5 \\ \hline 0 \end{array}$$

 $5 \div 5 = 1$, remainder 0

$$\begin{array}{r} 5 \overline{) 305} \\ 30 \\ \hline 5 \\ 5 \\ \hline 0 \end{array}$$

Therefore, $305 \div 5 = 61$.

4. $66 \div 4$ $6 \div 4 = 1$, remainder 2

$$4 \overline{) 66}$$

1

$$4 \overline{) \cancel{6} 26}$$

 $26 \div 4 = 6$, remainder 2

$$4 \overline{) \cancel{6} \cancel{2} 6}$$

Therefore, one potential answer to this question is: $66 \div 4 = 16$, remainder 2.

If we would like to find the decimal answer, we add .0 to the dividend:

$$4 \overline{) \cancel{6} \cancel{2} 6 . 0}$$

We then write in the remainder from earlier:

$$4 \overline{) \cancel{6} \cancel{2} 6 . \cancel{2} 0}$$

 $20 \div 4 = 5$, remainder 0

$$4 \overline{) \cancel{6} \cancel{2} 6 . \cancel{2} \cancel{0} 5}$$

 $66 \div 4 = 16.5$

5. $896 \div 8$ $8 \div 8 = 1$, remainder 0

$$8 \overline{) 896}$$

1

 $9 \div 8 = 1$, remainder 1

$$8 \overline{) 896}$$

1 1

 $16 \div 8 = 2$, remainder 0

$$8 \overline{) 8916}$$

1 1 2

$$8 \overline{) 8916}$$

Therefore, $896 \div 8 = 112$.

6. $30.75 \div 3$ $3 \div 3 = 1$, remainder 0

$$\begin{array}{r} 3 \overline{) 30.75} \\ \underline{3} \\ \end{array}$$

1 .

 $0 \div 3 = 0$, remainder 0

$$\begin{array}{r} 3 \overline{) 30.75} \\ \underline{3} \\ \end{array}$$

1 0 .

 $7 \div 3 = 2$, remainder 1

$$\begin{array}{r} 3 \overline{) 30.75} \\ \underline{3} \\ \end{array}$$

1 0 . 2

 $15 \div 3 = 5$, remainder 0

$$\begin{array}{r} 3 \overline{) 30.75} \\ \underline{3} \\ \end{array}$$

1 0 . 2 5

$$\begin{array}{r} 3 \overline{) 30.75} \\ \underline{3} \\ \end{array}$$

Therefore, $30.75 \div 3 = 10.25$

7. $3171 \div 7$ $3 \div 7 = 0$, remainder 3

$$\begin{array}{r} 7 \overline{) 3171} \\ 0 \end{array}$$

 $31 \div 7 = 4$, remainder 3

$$\begin{array}{r} 7 \overline{) 3171} \\ 0 \quad 4 \end{array}$$

 $37 \div 7 = 5$, remainder 2

$$\begin{array}{r} 7 \overline{) 3171} \\ 0 \quad 4 \quad 5 \end{array}$$

 $21 \div 7 = 3$, remainder 0

$$\begin{array}{r} 7 \overline{) 3171} \\ 0 \quad 4 \quad 5 \quad 3 \end{array}$$

$$\begin{array}{r} 7 \overline{) 3171} \\ 3 \quad 31 \quad 37 \quad 21 \end{array}$$

Therefore $3171 \div 7 = 453$.

8. $34 \div 3$

$$3 \overline{) 34}$$

$3 \div 3 = 1$, remainder 0

$$1 \\ 3 \overline{) 34}$$

$4 \div 3 = 1$, remainder 1

$$1 \\ 3 \overline{) 34}$$

Therefore, one possible solution to this question is $34 \div 3 = 11$, remainder 1.

If we want to find the decimal version, we write .0 next to the dividend:

$$1 \\ 3 \overline{) 34.0}$$

We then write in the remainder that we found previously:

$$1 \\ 3 \overline{) 34.10}$$

$10 \div 3 = 3$, remainder 1

We do not have remainder 0, so we add another 0 after the decimal point of the dividend:

$$1 \\ 3 \overline{) 34.100}$$

$10 \div 3 = 3$, remainder 1

Again, we do not have remainder 0, so we add another 0:

$$\begin{array}{r}
 1 \quad 1 \quad . \quad 3 \quad 3 \\
 3 \overline{) 3 \quad 4 \quad . \quad 10 \quad 10 \quad 10} \\
 10 \div 3 = 3, \text{ remainder } 1
 \end{array}$$

$$\begin{array}{r}
 1 \quad 1 \quad . \quad 3 \quad 3 \quad 3 \\
 3 \overline{) 3 \quad 4 \quad . \quad 10 \quad 10 \quad 10 \quad 10}
 \end{array}$$

Since we keep getting the same remainder, we know that we will have .3333.... up to infinite 3s after the decimal point. It would usually be sufficient to say '34 ÷ 3 is approximately 11.333', or we could say '34 ÷ 3 = 11.3̇.'

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