



Converting fractions, decimals and percentages

Study Development Worksheet

Questions

Converting decimals to fractions

Convert the following from decimals into fractions:

1. 0.13
2. 0.25
3. $0.\dot{6}$
4. 0.425
5. 1.65

Converting decimals to percentages

Convert the following from decimals to percentages:

1. 0.43
2. 0.667
3. 1.45
4. 0.004
5. 20.5

Converting percentages to decimals

Convert the following from percentages to decimals:

1. 56%
2. 27%
3. 135%
4. 0.1%
5. 14.58%



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Converting percentages to fractions

Convert the following from percentages to fractions:

1. 12%
2. 33.3%
3. 50%
4. 125%
5. 0.5%

Converting fractions to decimals

Convert the following from fractions to decimals:

1. $\frac{1}{25}$
2. $\frac{4}{5}$
3. $\frac{1}{6}$
4. $\frac{6}{10}$
5. $4\frac{2}{5}$

Converting fractions to percentages

Convert the following from fractions to percentages:

1. $\frac{6}{100}$
2. $\frac{2}{7}$
3. $3\frac{1}{12}$
4. $\frac{1}{3}$
5. $1\frac{1}{4}$



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Answers

Converting decimals to fractions

1. 0.13 has 2 values after the decimal point, so we calculate $\frac{0.13 \times 10^2}{10^2} = \frac{13}{100}$. Since 13 and 100 have no common factors other than 1, this is the final answer.
2. 0.25 has 2 values after the decimal point, so we calculate $\frac{0.25 \times 10^2}{10^2} = \frac{25}{100}$. Since 25 and 100 have a common factor of 25, we divide both by 25, to get $\frac{1}{4}$.
3. $0.\dot{6}$ has an infinite number of values after the decimal point. This is one of the values that we must remember. $0.\dot{6} = \frac{2}{3}$.
4. 0.425 has 3 values after the decimal point, so we calculate $\frac{0.425 \times 10^3}{10^3} = \frac{425}{1000}$. Since 425 and 1000 have a common factor of 25, we divide both by 25, to get $\frac{17}{40}$. Since 17 and 40 have no common factors other than 1, this is the final answer.
5. 1.65 has 2 values after the decimal point, so we calculate $\frac{1.65 \times 10^2}{10^2} = \frac{165}{100}$. Since 165 and 100 have a common factor of 5, we divide both by 5, to get $\frac{33}{20}$. We can leave the answer as this, or we can convert it into a mixed number: $\frac{33}{20} = \frac{20}{20} + \frac{13}{20} = 1\frac{13}{20}$.

Converting decimals to percentages

1. $0.43 \times 100 = 43\%$
2. $0.667 \times 100 = 66.7\%$
3. $1.45 \times 100 = 145\%$
4. $0.004 \times 100 = 0.4\%$
5. $20.5 \times 100 = 2050\%$



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Converting percentages to decimals

1. $56 \div 100 = 0.56$
2. $27 \div 100 = 0.27$
3. $135 \div 100 = 1.35$
4. $0.1 \div 100 = 0.001$
5. $14.58 \div 100 = 0.1458$

Converting percentages to fractions

1. $\frac{12}{100} = \frac{3}{25}$
2. $\frac{33.\dot{3}}{100} = \frac{\left(\frac{100}{3}\right)}{100} = \frac{100}{300} = \frac{1}{3}$
3. $\frac{50}{100} = \frac{1}{2}$
4. $\frac{125}{100} = \frac{5}{4} = 1\frac{1}{4}$
5. $\frac{0.5}{100} = \frac{1}{200}$

Converting fractions to decimals

1. $\frac{1}{25} = 0.04$
6. $\frac{4}{5} = 0.8$
7. $\frac{1}{6} = 0.1\dot{5}$
8. $\frac{6}{10} = 0.6$
9. $4\frac{2}{5} = 4 + 0.4 = 4.4$



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Converting fractions to percentages

1. $\frac{6}{100} = 0.06 = 6\%$
2. $\frac{2}{7} = 0.2857143 = 28.57143\%$
3. $3\frac{1}{12} = 3 + 0.08\dot{3} = 3.08\dot{3} = 308.\dot{3}\%$
4. $\frac{1}{3} = 0.\dot{3} = 33.\dot{3}\%$
5. $1\frac{1}{4} = 1 + 0.25 = 1.25 = 125\%$

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