

% ↔ 0.?

Often we need to change percents to decimals or decimals to percents.

To change a percent to a decimal . . .

- Think of it as a fraction with a denominator of 100.
- Divide by 100, sliding the decimal point two places to the left.

12.5%

$$12.5\% = \frac{12.5}{100}$$

$$12.5 \div 100 = 0.125$$

To change a decimal to a percent . . .

- Think of it as a ratio.
- Multiply each term by 100 to get a fraction with a denominator of 100.
- Express it as a percent.

0.631

0.631

$$\frac{0.631}{1} \xrightarrow{\times 100} \frac{63.1}{100}$$

63.1%

TRY THESE IN YOUR HEAD.



Change to a percent.

1. 0.53
2. 0.10
3. 0.36
4. 1.5
5. 0.025

Change to a decimal.

6. 65%
7. 20%
8. 27.5%
9. 165%
10. 3.3%

POWER BUILDER A

Change to a percent:

Change to a decimal:

1. $0.01 =$ _____
2. $0.08 =$ _____
3. $0.11 =$ _____
4. $0.18 =$ _____
5. $0.29 =$ _____
6. $0.7 =$ _____
7. $0.9 =$ _____
8. $0.123 =$ _____
9. $0.009 =$ _____
10. $1.4 =$ _____

11. $10\% =$ _____
12. $3\% =$ _____
13. $25\% =$ _____
14. $38\% =$ _____
15. $99\% =$ _____
16. $50\% =$ _____
17. $66.6\% =$ _____
18. $0.1\% =$ _____
19. $1.125\% =$ _____
20. $114\% =$ _____

THINK IT THROUGH



Which is larger: $\frac{1}{10}$ of 1%, or 1% of $\frac{1}{10}$?

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POWER BUILDER B

Change to a percent:

Change to a decimal:

1. $0.05 =$ _____
2. $0.09 =$ _____
3. $0.22 =$ _____
4. $0.81 =$ _____
5. $0.99 =$ _____
6. $0.6 =$ _____
7. $0.7 =$ _____
8. $0.5555 =$ _____
9. $0.0099 =$ _____
10. $5.5 =$ _____

11. $20\% =$ _____
12. $1\% =$ _____
13. $35\% =$ _____
14. $83\% =$ _____
15. $91\% =$ _____
16. $40\% =$ _____
17. $99.99\% =$ _____
18. $0.3\% =$ _____
19. $2.125\% =$ _____
20. $200\% =$ _____

THINK IT THROUGH



Advertisements claim that a popular brand of soap is $99\frac{99}{100}\%$ pure. What percent and fraction of the soap is "impure"?

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POWER BUILDER A

Change to a percent:

1. 0.01 = _____
2. 0.08 = _____
3. 0.11 = _____
4. 0.18 = _____
5. 0.29 = _____
6. 0.7 = _____
7. 0.9 = _____
8. 0.123 = _____
9. 0.009 = _____
10. 1.4 = _____

Change to a decimal:

11. 10% = _____
12. 3% = _____
13. 25% = _____
14. 38% = _____
15. 99% = _____
16. 50% = _____
17. 66.6% = _____
18. 0.1% = _____
19. 1.125% = _____
20. 114% = _____

THINK IT THROUGH



Which is larger: $\frac{1}{10}$ of 1%, or 1% of $\frac{1}{10}$?

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POWER BUILDER B

Change to a percent:

1. 0.05 = _____
2. 0.09 = _____
3. 0.22 = _____
4. 0.81 = _____
5. 0.99 = _____
6. 0.6 = _____
7. 0.7 = _____
8. 0.5555 = _____
9. 0.0099 = _____
10. 5.5 = _____

Change to a decimal:

11. 20% = _____
12. 1% = _____
13. 35% = _____
14. 83% = _____
15. 91% = _____
16. 40% = _____
17. 99.99% = _____
18. 0.3% = _____
19. 2.125% = _____
20. 200% = _____

THINK IT THROUGH



Advertisements claim that a popular brand of soap is $99 \frac{99}{100}$ % pure. What percent and fraction of the soap is "impure"?

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