

GRADE 7 · RATIOS & PROPORTIONAL RELATIONSHIPS · HOMEWORK

MULTI-STEP PERCENT PROBLEMS

Today's goal: I can solve multi-step percent problems, including by using proportional relationships.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.



Mild

Tan the Turtle



Medium

Digit the Fox



Spicy

Blaze the Dragon

WATCH MR DJ SOLVE

Find 12% of 150.

1 $0.12 \times 150 = 18.$

Answer: **18**



REMEMBER Increase by p%: multiply by $1 + p/100$. Decrease by p%: multiply by $1 - p/100$. Percent change = $(\text{new} - \text{old}) \div \text{old}$. Percents taken of different wholes are worth different amounts.



FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 Find 60% of 45.

Answer



OOPS ALERT

Careful on #1! The slip Mr DJ sees most: Answered 60.



MEDIUM

Digit the Fox: Stretch your brain.

- 2** Increase 80 by 25%.

Answer

- 3** Decrease your answer to question 2 by 20%.

Answer

- 4** Find the percent change from 80 to 100.

Answer

- 5** Find the percent change from 100 to 80.

Answer



SPICY

Blaze the Dragon: Bring the heat!

6 You started at 80. Where did you finish? What is surprising about that?

Answer

7 Your last two answers are not the same size, yet they describe the same \$20 gap. Explain why, and say what that means about undoing percent changes.

Answer



How did this sheet feel? ☐ Easy for me ☐ Just right ☐ Made me think

Stuck? Watch Mr DJ explain it

"Finding Percent of a Number: Step by Step Guide" on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free: puzzles.mathwithmrdj.com