

Thursday HW

NAME _____

DATE _____

PERIOD _____

Unit 3, Lesson 15: Finding This Percent of That

1. a. To find 40% of 75, Priya calculates $\frac{2}{5} \cdot 75$. Does her calculation give the correct value for 40% of 75? Explain or show how you know.

Yes - $\frac{2}{5} = \frac{4}{10} = \frac{40}{100} = 40\%$

- b. If x represents a number, does $\frac{2}{5} \cdot x$ always represent 40% of that number? Explain your reasoning.

yes see above

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2. Han spent 75 minutes practicing the piano over the weekend. For each question, explain or show your reasoning.

- a. Priya practiced the violin for 152% as much time as Han practiced the piano. How long did she practice?

1.52

min	%
75	100
7.5	10
0.75	1
114	152

or $1.52 \times 75 = 114$

- b. Tyler practiced the clarinet for 64% as much time as Han practiced the piano. How long did he practice?

min	%
75	100
7.5	10
0.75	1
48	64

or $0.64 \times 75 = 48$

3. Last Sunday 1,575 people visited the amusement park. 56% of the visitors were adults, 16% were teenagers, and 28% were children ages 12 and under. Find the number of adults, teenagers, and children that visited the park.

%	people
100	1575
56	882
16	252
28	441

4. Order from greatest to least:

- 55% of 180 $180 \times .55 = 99$
- 300% of 26 $26 \times 3 = 78$

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Unit 3, Lesson 16: Finding the Percentage

1. A sign in front of a roller coaster says "You must be 40 inches tall to ride." What percentage of this height is:

a. 34 inches?

$$\frac{34}{40}$$

$$34 \div 40 = 0.85 = \frac{85}{100} = 85\%$$

b. 54 inches?

$$\frac{54}{40}$$

$$54 \div 40 = 1.35 = \frac{135}{100} = 135\%$$

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2. At a hardware store, a tool set normally costs \$80. During a sale this week, the tool set costs \$12 less than usual. What percentage of the usual price is the savings? Explain or show your reasoning.

\$12 out of \$80

$$\frac{12}{80} = 12 \div 80 = 0.15 = \frac{15}{100} = 15\%$$

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3. A bathtub can hold 80 gallons of water. The faucet flows at a rate of 4 gallons per minute. What percentage of the tub will be filled after 6 minutes?

$$4 \text{ gallons} \times 6 \text{ min} = 24 \text{ gallons in 6 min}$$

$$\frac{24 \text{ gallons}}{80 \text{ gallons}} = 0.3 = \frac{3}{10} = \frac{30}{100} = 30\%$$

4. The sale price of every item in a store is 85% of its usual price.

a. The usual price of a backpack is \$30, what is its sale price?

$$\$30 \times 0.85 = 25.50 \text{ or } 1\% = 0.80 \text{ so } 30 \times 0.85 = 25.50$$

b. The usual price of a sweatshirt is \$18, what is its sale price?

$$\$18 \times 0.85 = 15.30 \text{ or } 1\% = 0.18 \text{ so } 85 \times 18 = 15.30$$

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