

TEST WEDNESDAY 2/12

Percent & Proportions Test Review

1. What is 25% of 150? $\frac{x}{150} = \frac{25\%}{100} = \boxed{37.5}$
2. 70 is 10% of what #? $\frac{70}{x} = \frac{10\%}{100} = \boxed{700}$
3. What is 5% of 240? $\frac{x}{240} = \frac{5\%}{100} = \boxed{12}$
4. 110 is what % of 100? $\frac{110}{100} = \frac{x}{100} = \boxed{110\%}$
5. What is 140% of 80? $\frac{x}{80} = \frac{140\%}{100} = \boxed{112}$

6. There are 24 students in Jake's class who have brown eyes. This represents the 75% of the students in the class. How many students are there in Jake's class?

A 36

B 30

C 18

D 32

$$\frac{24}{x} = \frac{75\%}{100} \quad \frac{75x}{75} = \frac{2400}{75} \quad x = 32$$

7. There were 72 light bulbs delivered to the hardware store last week. If 12.5% of the light bulbs were delivered on Monday, how many light bulbs were delivered on Monday?

F 24

G 9

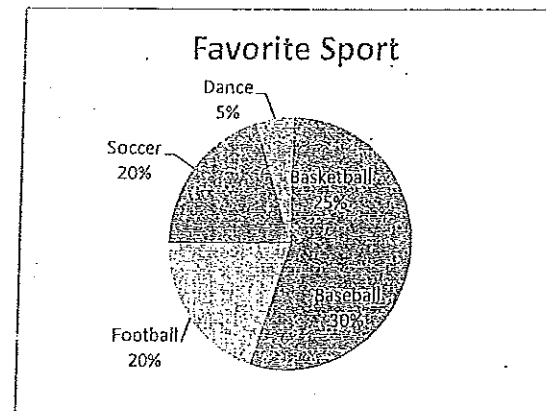
H 3.5

J 900

$$\frac{x}{72} = \frac{12.5\%}{100} \quad 100x = 72 \cdot 12.5$$

$$\frac{100x}{100} = \frac{900}{100}$$

8. The graph represents the favorite sports of the total 100 students at Bowie Middle School. What statement is best supported by the graph?



A More students like soccer better than basketball and dance combined.

B exactly 200 students say football is their favorite sport.

C Less than 250 students say baseball is their favorite sport.

D The difference between the number of students who say soccer is their favorite and the number who say basketball is their favorite is only 5 students.

↑ TYPO 1000* students

9. Justin is buying a cell phone that has a regular price of \$149. The cell phone is on sale for 15% off the regular price. What is the sale price of the cell phone?

$$\frac{xP}{149W} = \frac{15\%}{100} \quad 100x = 149 \cdot 15 \quad 22.35 - \text{discount}$$

$$\frac{100x}{100} = \frac{2235}{100} \quad 149 - 22.35 = \boxed{\$126.65}$$

10. In the Stoneridge apartment complex, 35% of the apartments have one bedroom. If there are 49 one-bedroom apartments, what is the total number of apartments at Stoneridge?

$$\frac{49P}{xW} = \frac{35\%}{100} \quad \frac{4900}{35} = \frac{35x}{35}$$

$$\boxed{140 = x}$$

11. Ian earned \$70 babysitting and wants to buy a skateboard with the money he earned. The price of the skateboard is \$68 and the sales tax is 8%. How much more will he need to buy the skateboard?

$$\frac{xP}{68W} = \frac{8\%}{100} \quad 100x = 68 \cdot 8 \quad x = 5.44 (\text{tax})$$

$$\frac{100x}{100} = \frac{544}{100} \quad 68 + 5.44 = 73.44$$

$$73.44 - 70 = \boxed{3.44}$$

12. The table below shows the price of sandwiches at a local deli. Samantha orders a roast beef sandwich, and Derrick orders a chicken wrap. Tax is 6% and they want to leave a 20% tip. Use estimation to determine how much the total will be.

Sandwich	Cost
Turkey Panini	\$7.89
Roast Beef	\$7.49
Cheese Melt	\$6.29
Chicken Wrap	\$6.59

A \$15
B \$19
C \$25
D \$16

$$7.49 + 6.59 = 14.08 \approx 14$$

$$\frac{xP}{14W} = \frac{6\%}{100} \quad 100x = 14 \cdot 6 \quad x = 0.84 \approx 1.00$$

$$\frac{100x}{100} = \frac{84}{100}$$

$$\frac{xP}{15W} = \frac{20\%}{100} \quad 100x = 300 \quad x = 3$$

$$14.00 + 1.00 + 3.00 = \boxed{18}$$

13. On Friday, Alyssa's tomato plant was 6.2 inches tall. One week later, it's size had increased by 78%. How tall was the plant after one week?

A 4.836 in B .78 inches C 11.036 D 483.6 inches

* SKIP *

14. You go to the mall and want to buy a shirt for \$14.50 and a pair of jeans for \$35. There is a 7.5% sales tax rate on clothing. If you give the sales associate \$55, how much change will you receive?

$$14.50 + 35 = 49.50$$

$$\frac{xP}{49.50W} = \frac{7.5\%}{100} \quad 7.5 \cdot 49.50 = 100x$$

$$371.25 = 100x \quad 3.7125 = x$$

$$49.50 + 3.71 = 53.21$$

$$55.00 - 53.21 = \boxed{1.79}$$

* SKIP *

$$3.71 = x$$

Proportion Review:

16. Teresa is building a scale model of the JPMorgan Tower in Houston. In her scale model, 1.5 inches represents 61 meters. Since the actual building is 305 meters tall, what height should Teresa build the model?

A 10.5 inches B 9 inches C 5 inches D 7.5 inches

$$\frac{1.5 \text{ in}}{61 \text{ m}} = \frac{x \text{ in}}{305 \text{ m}} \quad * \text{ or find cross products!}$$

$$1.5 \cdot 305 = 61 \cdot x$$

$$457.5 = 61x$$

$$x = \frac{457.5}{61} \approx 7.5$$

17. Jorge bought 3.75 pounds of jalapeno peppers from the farmer's market. How many ounces of peppers did Jorge buy?

$$\frac{1 \text{ lb}}{16 \text{ oz}} = \frac{3.75 \text{ lb}}{x \text{ oz}}$$

$$1 \cdot x = 3.75 \cdot 16$$

$$x = 60$$

$$\boxed{60 = x}$$

18. Sophie can read 40 pages in 20 minutes. At this rate, how long will it take to read 480 pages?

A 8 hours

B 240 hours

C 4 hours

D 160 hours

$$\frac{40 \text{ pg}}{20 \text{ min}} = \frac{480 \text{ pg}}{x \text{ min}}$$

$$40x = 9600$$

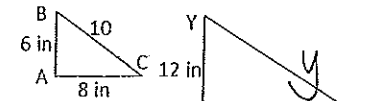
$$x = 240 \text{ min}$$

$$\frac{60 \text{ min}}{1 \text{ hr}} = \frac{240 \text{ min}}{x \text{ hr}}$$

$$60x = 240$$

$$x = 4 \text{ hr}$$

19. Triangle ABC is similar to triangle XYZ. Find the perimeter of triangle XYZ.



A 12 inches
C 24 inches

B 18 inches
D 48 inches

$$\frac{6 \text{ in}}{8 \text{ in}} = \frac{12 \text{ in}}{x \text{ in}}$$

$$6x = 96$$

$$x = 16$$

$$\frac{6 \text{ in}}{10 \text{ in}} = \frac{12 \text{ in}}{y \text{ in}}$$

$$6y = 120$$

$$y = 20$$

$$20 + 16 + 12 = 48$$

20. Are these ratios proportional?

$$\frac{600 \text{ miles}}{20 \text{ minutes}} = \frac{30 \text{ miles}}{1 \text{ hour}}$$

NO!

A Yes B No

$$\frac{60 \text{ min}}{1 \text{ hour}} = \frac{60 \text{ min}}{60 \text{ min}}$$

$$x3 \rightarrow$$

Name: Homework 2/11

Percents

Evaluate: Percents

1. Benita answered 85% of the test questions correctly. If she answered 9 questions incorrectly, how many questions were on the test?

				.		
0	0	0	0		0	0
1	1	1	1		1	1
2	2	2	2		2	2
3	3	3	3		3	3
4	4	4	4		4	4
5	5	5	5		5	5
6	6	6	6		6	6
7	7	7	7		7	7
8	8	8	8		8	8
9	9	9	9		9	9

2. Elliot ordered 3 chicken sandwiches at \$1.90 each, 2 orders of onion rings at \$1.75 each, and 3 bottles of water at \$1.50 each. If Elliot had a coupon to save 20%, how much is his discount?

- A \$0.52
- B \$1.37
- C \$2.74
- D \$10.96

3. Katie spent \$20 at the homecoming game on the following items:

- 3 ribbons at \$1.50 each
- 1 bag of popcorn for \$3.00
- 2 tickets at \$5.00 each
- 1 drink at \$2.50

What percent of the \$20 did Katie spend on ribbons?

- A 22.5%
- B 20%
- C 15.5%
- D 4.5%

4. Aaron wants to purchase a new video game. The table below shows the regular price and percent discount at four stores.

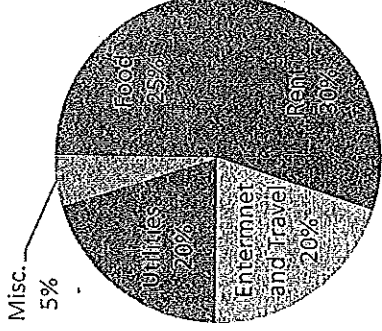
Store	Regular Price	Percent Discount
Games 4 You	\$50	20%
Game Mania	\$58	30%
World of Games	\$45	10%
Game Dot	\$52	15%

Which store had the lowest price for the video game?

- A Games 4 You
- B Game Mania
- C World of Games
- D Game Dot

5. The Redpath family has a monthly budget of \$4,000. The circle graph below shows the details of their budget.

Monthly Budget



Which statement is best supported by the graph?

- A More money is budgeted for utilities than for food and miscellaneous combined.
- B Exactly \$800 per month is budgeted for entertainment and travel.
- C Less than \$1,000 is budgeted for rent each month.
- D The difference between the amounts budgeted for food and utilities is only \$500.