Unit: Percents Review

Name _____

Date _____Pd_____

PERCENTS UNIT STUDY GUIDE

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

I CAN USE PROPORTIONS TO SOLVE PROBLEMS.

1. At the neighborhood Fourth of July party, Mrs. O'Conner plans to serve banana pudding. She plans to make 2 batches for every 9 people attending. If 72 people will attend the Fourth of July party, how many batches does Mrs. O'Conner need to make?

2. Find the missing value.

$$\frac{7}{8} = \frac{x}{28.8}$$

3. A gear rotates 8 times every 15 seconds. Based on this information, put a check mark next to any true statement below.

The gear rotates 48 times in 90 seconds.	The gear rotates 16 times in 30 seconds.
The gear rotates 32 times in one minute.	The gear rotates 24 times in 60 seconds.

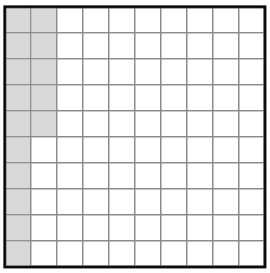
4. Michaela spent $234 preparing for a party with 18 guests. Each guest costs the same amount of money. How many guests could attend a party that cost $104 to prepare?

5. A dolphin jumps 54 times in a 6-hour period. At this rate, how many jumps would be expected in a 2-hour period?

6. A package of 12 cans of black beans cost $6.84. What is the cost of one can of black beans?

I CAN ESTIMATE PERCENTS.

7. Use the model below to determine the fraction, decimal, and percent that the shaded portion represents.



fraction: _____

decimal: _____

percent: _____

8. Eme is asked to find 15% of the number 60. If Eme knows that 10% is 6, how can Eme use that information to find 15% of 60?

I CAN SOLVE PERCENT PROBLEMS.

9. Fifteen is 30% of what number?

10. A recipe for lemonade punch calls for 6 cups of lemonade for every 24 cups of punch. Circle the name of the student who wrote an equation that can be used to find x, the percent of lemonade in the recipe.

ELIZABETH

$$\frac{6}{24} = \frac{x}{100}$$

OWEN

$$\frac{24}{6} = \frac{x}{100}$$

CASEY

$$\frac{24}{30} = \frac{x}{100}$$

DIANNA

$$\frac{6}{30} = \frac{x}{100}$$

11. Of the 650 students at Westmoreland Junior High, 80% will attend the field trip. How many students will attend the field trip?

12. All items produced in a factory are checked for defects. Of the 300 items checked, 3% were found to be defective. How many of the items checked worked correctly?

I CAN SOLVE REAL LIFE PERCENT PROBLEMS.	
13. A box of snacks contained 20 individual packages. The newly designed box contains 28 individual packages. By what percentage did the number of individual packages increase?	14. A shipping and handling fee of $35.00 is charged on all furniture orders over $250. If the order total is $437.50, what percent is the shipping and handling fee?
15. At the beginning of the school year, Anderson Middle School had 480 students. At the end of the year, it had 504 students. What is the percent of change in the enrollment?	16. A sweater is marked 30% off during an end of season sale. If the sweater was originally $56.00, what is the sale price of the sweater?
17. Several trays of danishes are ordered for a breakfast. About 35% are cream filled. There are 4 trays with 18 danishes on each tray. Approximately how many danishes contain cream filling?	18. On Monday, Jeff bought a t-shirt for 40% off the regular price of $16.00, not including tax. The next day, the t-shirt that Jeff bought was marked down to 75% off its regular price. How much would Jeff have saved, not including tax, if he had waited until Tuesday to buy the t-shirt?

I CAN FIND THE PERCENT ERROR.	
19. A hospital bill is estimated to be $480.00. It ends up actually costing the patient $524.50. What is the percent error in the bill? Round to the nearest tenths place.	20. Marco calculated that he could run a 5K race in 28 minutes. His actual time was 26 minutes. What is the percent error in his estimation? Round to the nearest tenths place.

I CAN SOLVE SIMPLE INTEREST PROBLEMS.	
21. Amanda invests $5,000 in a CD at an annual interest rate of 2%. What will her investment be worth at the end of three years?	22. Jamie borrows $2,000 to purchase new living room furniture. She will pay an 8% interest rate over 18 months. How much will Jamie pay in interest?

I'VE GOT IT!

What concepts can I ace on the test?

HELP!

What concepts do I need to study?

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PERCENTS UNIT STUDY GUIDE

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

I CAN USE PROPORTIONS TO SOLVE PROBLEMS.

1. At the neighborhood Fourth of July party, Mrs. O'Conner plans to serve banana pudding. She plans to make 2 batches for every 9 people attending. If 72 people will attend the Fourth of July party, how many batches does Mrs. O'Conner need to make?

$\frac{2}{9} = \frac{x}{72}$

16 batches

2. Find the missing value.

$$\frac{7}{8} = \frac{x}{28.8}$$

25.2

3. A gear rotates 8 times every 15 seconds. Based on this information, put a check mark next to any true statement below.

- The gear rotates 48 times in 90 seconds. ✓
- The gear rotates 16 times in 30 seconds. ✓
- The gear rotates 32 times in one minute. ✓
- The gear rotates 24 times in 60 seconds.

4. Michaela spent $234 preparing for a party with 18 guests. Each guest costs the same amount of money. How many guests could attend a party that cost $104 to prepare?

$\frac{234}{18} = \frac{104}{x}$

8 guests

5. A dolphin jumps 54 times in a 6-hour period. At this rate, how many jumps would be expected in a 2-hour period?

$\frac{54}{6} = \frac{x}{2}$

18 jumps

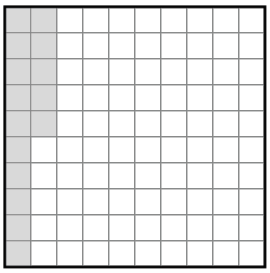
6. A package of 12 cans of black beans cost $6.84. What is the cost of one can of black beans?

$\frac{6.84}{12} = \frac{x}{1}$

$0.57 for 1 can

I CAN ESTIMATE PERCENTS.

7. Use the model below to determine the fraction, decimal, and percent that the shaded portion represents.



fraction: $\frac{15}{100} = \frac{3}{20}$

decimal: 0.15

percent: 15%

8. Eme is asked to find 15% of the number 60. If Eme knows that 10% is 6, how can Eme use that information to find 15% of 60?

If Eme knows that 10% is 6, then she knows that 5% is 3. Eme could add 6 and 3 together to find that 15% of 60 is 9.

I CAN SOLVE PERCENT PROBLEMS.

9. Fifteen is 30% of what number?

$\frac{30}{100} = \frac{15}{x}$

50

10. A recipe for lemonade punch calls for 6 cups of lemonade for every 24 cups of punch. Circle the name of the student who wrote an equation that can be used to find x, the percent of lemonade in the recipe.

ELIZABETH: $\frac{6}{24} = \frac{x}{100}$

OWEN: $\frac{24}{6} = \frac{x}{100}$

CASEY: $\frac{24}{30} = \frac{x}{100}$

DIANNA: $\frac{6}{30} = \frac{x}{100}$

11. Of the 650 students at Westmoreland Junior High, 80% will attend the field trip. How many students will attend the field trip?

$\frac{80}{100} = \frac{x}{650}$

520 students

12. All items produced in a factory are checked for defects. Of the 300 items checked, 3% were found to be defective. How many of the items checked worked correctly?

$\frac{97}{100} = \frac{x}{300}$

291 work

I CAN SOLVE REAL LIFE PERCENT PROBLEMS.

13. A box of snacks contained 20 individual packages. The newly designed box contains 28 individual packages. By what percentage did the number of individual packages increase?

$$\frac{x}{100} = \frac{8}{20}$$

40%

14. A shipping and handling fee of $35.00 is charged on all furniture orders over $250. If the order total is $437.50, what percent is the shipping and handling fee?

$$\frac{x}{100} = \frac{35}{437.50}$$

8%

15. At the beginning of the school year, Anderson Middle School had 480 students. At the end of the year, it had 504 students. What is the percent of change in the enrollment?

$$\frac{x}{100} = \frac{24}{480}$$

5%

16. A sweater is marked 30% off during an end of season sale. If the sweater was originally $56.00, what is the sale price of the sweater?

$$\frac{70}{100} = \frac{x}{56.00}$$

$ 39.20

17. Several trays of danishes are ordered for a breakfast. About 35% are cream filled. There are 4 trays with 18 danishes on each tray. Approximately how many danishes contain cream filling?

$$\frac{35}{100} = \frac{x}{72}$$

about 25

18. On Monday, Jeff bought a t-shirt for 40% off the regular price of $16.00, not including tax. The next day, the t-shirt that Jeff bought was marked down to 75% off its regular price. How much would Jeff have saved, not including tax, if he had waited until Tuesday to buy the t-shirt?

$$\frac{60}{100} = \frac{x}{16}$$

$$\frac{25}{100} = \frac{x}{16}$$

$5.60

I CAN FIND THE PERCENT ERROR.

19. A hospital bill is estimated to be $480.00. It ends up actually costing the patient $524.50. What is the percent error in the bill? Round to the nearest tenths place.

$$\frac{x}{100} = \frac{44.50}{524.50}$$

8.5%

20. Marco calculated that he could run a 5K race in 28 minutes. His actual time was 26 minutes. What is the percent error in his estimation? Round to the nearest tenths place.

$$\frac{x}{100} = \frac{2}{26}$$

7.7%

I CAN SOLVE SIMPLE INTEREST PROBLEMS.

21. Amanda invests $5,000 in a CD at an annual interest rate of 2%. What will her investment be worth at the end of three years?

I = prt
I = 5,000(0.02)(3)
I = 300

$5,300

22. Jamie borrows $2,000 to purchase new living room furniture. She will pay an 8% interest rate over 18 months. How much will Jamie pay in interest?

I = prt
I =
2,000(0.08)(1.5)
I = 240

$240

I'VE GOT IT!

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HELP!

What concepts do I need to study?