Practice Test: Unit 4 Percents **Name:** Key
7th Grade Accelerated Math

For 1–15, *write the letter of the choice that best completes the statement or answers the question. Use CAPITAL LETTERS for your answer please.*

B 1. Write 0.678 as a percent

a. 0.0678% b. 67.8% c. 6.78% d. 678%

C 2. Write $\frac{17}{40}$ as a percent

a. 0.425% b. 4.25% c. 42.5% d. 425%

D 3. 26 is what percent of 20

a. 1.30% b. 0.17% c. 16.67% d. 130.00%

D 4. What is 35% of 63?

a. 180 b. 55.6 c. 2205 d. 22.05

A 5. 19 is what percent of 40?

a. 47.50% b. 2.10% c. 40.40% d. 52.30%

C 6. 32 is 40% of what?

a. 0.8 b. 125 c. 80 d. 1.3

B 7. A toy store's percent of markup is 35%. A model train costs the store $100. Find the markup.

a. $135 b. $35 c. $285.71 d. $65

C 8. A sporting goods store pays $180 for a rubber raft. The percent of markup is 40%. Find the raft's selling price.

a. 72 b. $108 c. $252 d. $450

D 9. All swimming equipment is on sale with a 35% discount. A snorkeling set regularly sells for $60. Find the discount.

a. $44.44 b. $39 c. $81 d. $21

C 10. Video games are on sale for 35% off. If a particular game regularly sells for $99.50, what is the sale price? (To the nearest penny)

a. 34.83 b. $96.02 c. $64.68 d. $134.33

A 11. Identify the percent of increase from 160 to 190. (To the nearest tenth of a percent)

a. 18.8% b. 84.2% c. 15.8% d. 0.2%

A 12. Identify the percent of decrease from 140 to 105. (To the nearest tenth of a percent)

a. 25% b. 0.3% c. 33.3% d. 133.3%

C 13. Identify the percent of increase from 24 to 144. (To the nearest tenth of a percent)

a. 5% b. 16.67% c. 500% d. 0.17%

A 14. Identify the greatest possible error if an object has a mass of 82. g.

a. 0.5 g b. 1.2 g c. 0.05 g d. 0.12 g

B 15. Identify the percent error if the length of an object is measured 37.424 cm.

a. 0.00001% b. 0.001% c. 0.1% d. 1.3%

For 16–31, *answer the following questions. Show work for full credit.*

16. Find 78% of 380. (To the nearest tenth) #16 answer: 296.4

$.78 \cdot 380$

17. What percent of 134 is 66? (To the nearest tenth of a percent) #17 answer: 49.3%

$134x = 66$

$x = .4925$

18. 24 is 36% of what number? (To the nearest tenth) #18 answer: 66.7

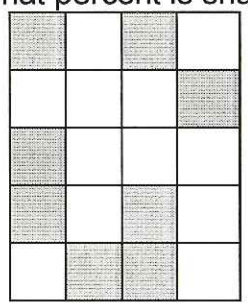
$24 = .36x$

$x = 66.\overline{6}$

19. If you earned 82 points out of 90 points on a test, what was your score as a percent? (To the nearest tenth of a percent) #19 answer: 91.1%

$\frac{82}{90} = .9\overline{1}$

20. What percent is shaded in the grid? #20 answer: 40%



$\frac{8}{20} = \frac{4}{10} = .4$

21. Mr. Roy surveyed 80 students to find out what their favorite subject is in school. The results are shown in the table below. Find the number of students that liked each subject the most. Show your WORK!

Favorite School Subject

Subject	% of Students
English	20%
Math	10%
Science	45%
History	25%

→ $.2 \cdot 80 = 16$
→ $.1 \cdot 80 = 8$
→ $.45 \cdot 80 = 36$
→ $.25 \cdot 80 = 20$

English Answer: 16

Math Answer: 8

Science Answer: 36

History Answer: 20

22. Mrs Claus manages a clothing store. For a special promotion, she receives a shipment of coats that originally costs her $85 each. Usually, the percent of markup for her store is 70%. Find the usual selling price of one of the coats. (To the nearest tenth)

$\$85 \cdot 1.7$

#22 answer: $144.5

23. The owner of Mrs. Claus's store suggests that she mark each coat with a price tag of $127.50. Using the original cost from #22, what is the percent of markup for each coat?

$\frac{127.5-85}{85} = \frac{\$42.5}{\$85} = .5$

#23 answer: 50%

24. When a new model of computers became available, Computer World reduces the price of the older computers by 25%. Peter has $1,498 saved. If the original price of the computer is $2,100, does Peter have enough money to buy the computer at the sale price? Show your work!

$.75 \cdot \$2,100 = \$1,575$

He is short by $\$1,575 - \$1,498 = \$77$

Circle One: Yes or (NO)

#24 answer: $77
It cost $1,575

25. A person decides to invest $16,000. It grows with simple interest at a rate of 7% for 22 years. What is the final balance after the 22 years? Show your work!

$I = 16,000 \cdot .07 \cdot 22 = \$24,640$

F.B. → $\$16,000 + \$24,640$

#25 answer: $40,640

26. Hypothetically. Relli's in DeWitt had 30 workers in their restaurant in the year 2010. In 2011 they let go 20% of their workers due to budget cuts. In 2012, they are letting go another 10%. How many workers will they have at the beginning of 2013? Round to the nearest whole worker. Show your work!

1st Layoff $.2 \cdot 30 = 6$
1st Total $30 - 6 = 24$
2nd Layoff $24 \cdot .1 = 2.4$
2nd Total $24 - 2.4 = 21.6$

#26 answer: 22 workers

27. Mark comes to watch 70% of his girlfriend Amelia's basketball games. If the team plays 20 games, how many games did Mark **miss**?

$.3 \cdot 20 = 6$

#27 answer: 6 games

28. Mark is buying flowers for his girlfriend, in DeWitt. The original price of the flowers is $33.99, but everything in the store is 25% off. Mark is also fortunate because his mom gave him an additional 10% off coupon to use. Find the total cost of the flowers after both discounts. Then find the total cost AFTER TAXES. (To the nearest penny)

1st S.P $33.99 · .75 = $25.49

2nd S.P $25.49 · .9 = $22.94

Tax & Total $22.94 · 1.06 = $24.32

#28 Final Cost Before Taxes: $22.94

#28 Final Cost AFTER Taxes: $24.32

29. A teacher weights grades: **homework = 10%, classwork = 30%, tests/quizzes = 60%** Your score in each category: **homework = 71%, classwork = 93%, tests/quizzes = 80%** What will your overall percentage be for the class?

.1 · .71 + .3 · .93 + .6 · .8

.071 + .279 + .48

.83

#29 answer: 83%

30. A college student earns an A- in Calculus (4 credits), a B+ in Psychology (3 credits), an A- in Matrix Algebra (4 credits), and a D in Coral Reefs (1 credit). ***(A = 4, A- = 3.7, B+ = 3.3, B = 3, B- = 2.7, C+ = 2.3, C =2, C- = 1.7, D+ = 1.3, D = 1, and D- = .7)*** Find the student's GPA if the average is weighted based on credits. (To the nearest hundredth)

Total Credits 12

4 · 3.7 + 3 · 3.3 + 4 · 3.7 + 1 · 1

14.8 + 9.9 + 14.8 + 1

Total Weighted Credits = 40.5

GPA = 40.5 / 12 = 3.375

#30 answer: 3.38

31. Using the same student from #30, find the student's GPA if the average is NOT weighted (like in HS or JH). (To the nearest hundredth)

$$GPA = \frac{3.7 + 3.3 + 3.7 + 1}{4} = \frac{11.7}{4} = 2.925$$

#31 answer: 2.93

For 32–34, identify the greatest possible error **AND** the percent error for the measurements below. (To the nearest tenth of a percent)

32. 3.14 m

#32 GPE: .005m

#32 % error: .2%

33. 24 ft

#33 GPE: .5ft

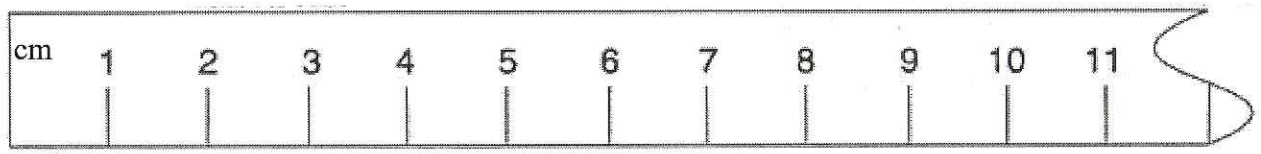
#35 % error: 2.1%

34. 1.085 g

#34 GPE: .0005g

#34 % error: .0%

35. Identify the percent error of the black line drawn below. (To the nearest tenth of a percent)



#35 % error: 5.6%