Math 7 Study Guide - Mental Math Percent
Pre-ch.2 (No calculator)

Name Key
Block____ Date_____

TEST is Friday, January 24

Use the classnotes/examples from this unit to help you review. If you have misplaced your copy of any of the notes/examples, go to my weebly site and print them out.

Complete the Practice Questions on the following pages to prepare for the test. Be sure to show strategies and steps as we discussed in class. For full credit problems need to be correct and have correct work shown. Please correct with the key posted on line (will be posted on Thursday 1/23)

You should be able to do the following:

*Identify the fraction percent decimal conversions on the memory list in our notes

*Given a fraction or picture or situation, find the percent

*Find nice percents of nice numbers using mental math strategies

*Estimate percents of numbers using nice percents of nice numbers

*Find percent tax, discount, sale price, amount of tax and other applications (see notes) when the numbers are "nice.

Math 7 Practice Questions Name Key

Mental Math Percent Unit Block ____ Date ____

1) Find 20% of 350 $\frac{1}{5}$ 70	2) Find 30% of 40 $\frac{3}{10}$ $\frac{1}{10}$ of 40 = 4 x3 12	3) Write 1.5% as a decimal. 1.5% 0.015	4) Find 20% of 2500 $\frac{1}{5}$ 500 or $\frac{2}{10}$ of 2500 = 250 x2 500
5) Find 125% of 28 100% + 25% 28 + 7 35	6) What percent of X's are outside the box? out/all $\frac{2}{6} = \frac{1}{3}$ X X X X X X 33.3%	7) Sara made 31 out of her 50 free throws. What percent is this? made/tried $\frac{31}{50}$ x2 $\frac{62}{100}$ 62%	8) Write this fraction as a percent. $\frac{10}{16} = \frac{5}{8}$ M 62.5%
9) Find 4% of 3000 $\frac{4}{100}$ $\frac{1}{100}$ of 3000 = 30 x4 120	10) Write 0.7 as a percent. $\frac{7}{10} = \frac{70}{100}$ 70% or 0.7 →	11) Find 15% of 800 10% + 5% $\frac{1}{10}$ 10% ÷2 80 + 40 120	12) Find 51% of 6000 50% + 1% 3000 + 60 3060

25) Find 75% of 440

$\frac{3}{4}$

$\frac{1}{4}$ of 440 = 110 (×3) = 330

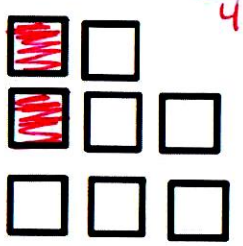
26) Find $66.\overline{6}$% of 18

$\frac{2}{3}$

$\frac{1}{3}$ of 18 = 6 (×2) = 12

27) Shade in 25% of these squares.

$\frac{1}{4} = \frac{?}{8}$



Shade 2

28) Find 80% of 550

$\frac{4}{5}$

$\frac{1}{5}$ of 550 = 110 (×4) = 440

Do not use $\frac{8}{10}$ on this one.

29) Find $33.\overline{3}$% of 330

$\frac{1}{3}$

110

30) Find 150% of 1600

100% + 50%

1600 + 800

2400

31) Find 12.5% of 80

$\frac{1}{8}$

10

32) Write the percent for 0.3

$\frac{3}{10} = \frac{30}{100}$

30%

33) Find 110% of 7200

100% + 10%

7200 + 720

7920

34) Find 5% of 1800

10% ÷ 2

$\frac{1}{10}$

180 ÷ 2

90

35) Find 90% of 600

$\frac{9}{10}$

$\frac{1}{10}$ of 600 = 60 (×9) = 540

OR

100% − 10% (÷10)

600 − 60

36) Write 8% as a fraction in simplest form.

$\frac{8}{100} \div \frac{4}{4} = \frac{2}{25}$

Answers Vary

37) Show two ways(use different percents) to get a GOOD estimate for 61% of 4568

Nice #'s

62.5 % of 4800

% Strategy

$\frac{5}{8}$

Steps

$\frac{1}{8}$ of 4800 = 600

×5

3000

Estimate

3000

Nice #'s

60 % of 4500

% Strategy

$\frac{3}{5}$

Steps

$\frac{1}{5}$ of 4500 = 900

×3

2700

Estimate

2700

OR

$66\frac{2}{3}\%$ of 4500

$\frac{2}{3}$

$\frac{1}{3}$ of 4500 = 1500

×2

3000

38) Show two ways(use different percents) to get a GOOD estimate for 14.5% of 7019

Nice #'s

15 % of 7000

% Strategy

10% + 5%

Steps

$\frac{1}{10}$ + 10% ÷ 2

700 + 350

1050

Estimate

1050

Nice #'s

12.5 % of 7200

% Strategy

$\frac{1}{8}$

Steps

7200

÷2

900

Estimate

900

39) Find the **savings** for a $480 item, if it is on sale for 25% off.

25% of 480

$\frac{1}{4}$

$120 off

$120 savings

40) Find the **percent tax** if an item cost $500 and the tax is $25.

$\frac{\text{tax}}{\text{item cost}}$ $\frac{25 \div 5}{500 \div 5} = \frac{5}{100}$

5% tax

41) There are 240 students at Eastside Middle School. 80 students are in chorus. What **percent** of the students are in chorus?

$\frac{\text{chorus}}{\text{all}}$ $\frac{80}{240} = \frac{1}{3}$

$33\frac{1}{3}\%$

42) Find the 15% **tip** on a meal that costs $40

15% of 40

10% + 5%

$\frac{1}{10}$ + 10% ÷ 2

4 + 2

$6 + tip

43) An item that regularly costs $400 is marked $50 off. What is the **percent discount**?

$\frac{\text{discount}}{\text{Reg. price}}$ $\frac{50}{400} = \frac{1}{8}$

12.5% off

44) Sara got 17 questions correct out of the 25 questions on the test. What **percent** does this represent?

$\frac{\text{correct}}{\text{all}}$ $\frac{17}{25} \times 4$ $\frac{68}{100}$

68%

45) An item regularly costs $70. It is marked 20% off. Find the **sale price**.

20% of 70

$\frac{2}{10}$

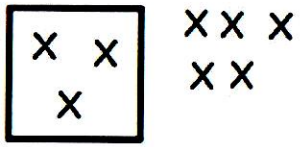
$\frac{1}{10}$ of 70 = 7 × 2

$14 off

70 − 14

$56 sale price

46) Find the **percent** of X's that are outside the box.



$\frac{\text{out}}{\text{all}}$ $\frac{5}{8}$

62.5%

47) Jared attempted 16 free throws and made 12 of them. What is his free throw **percentage**.

$\frac{\text{made}}{\text{attempted}}$ $\frac{12 \div 4}{16 \div 4} = \frac{3}{4}$

75%

48) An item regularly costs $600. Sales tax is 7%. How much **sales tax** will need to be paid?

7% of 600

$\frac{7}{100}$

$\frac{1}{100}$ of 600 = 6 × 7

$42 tax

49) Mr. Armstrong must pay 5% sales tax on the new car he is buying. The cost of the car is $20,000. How much will he have **to pay including sales tax**?

5% of 20,000

10% ÷ 2

2000 ÷ 2

$1000 tax

20000 + 1000

$21,000

50) An item is marked 40% off. If the regular price of the item is $15, what is the **sale price**?

40% of 15

$\frac{2}{5}$

$\frac{1}{5}$ of 15 = 3 × 2

$6 off

15 − 6

$9