Unit 8: Percent Name: _____

Pre-Algebra: Practice Test Hour: Key

8.1: I can write a fraction as a percent. 1 pt ea.

1. $\frac{6}{5} = \frac{12}{10}$ 120%

2. $\frac{24}{25} = \frac{96}{100}$ 96%

3. $\frac{7}{10} = \frac{7}{10}$ 70%

4. $\frac{9}{20} = \frac{45}{100}$ 45%

8.1: I can write a percent as a fraction in simplest terms.

5. 34% $\frac{34}{100}$ $\frac{17}{50}$

6. 55% $\frac{55}{100}$ $\frac{11}{20}$

7. 17% $\frac{17}{100}$

8. 24% $\frac{24}{100}$ $\frac{6}{25}$

8.1: I can write a decimal as a percent.

9. 0.452 45.2%

10. 0.05 5%

11. 1.39 139%

12. 0.3 30%

8.1 continued on next page

8.1 I can write a percent as a decimal.

13. 0.3%

.003

14. 247%

2.47

15. 44%

.44

16. 65.3%

.653

8.1 I can write the fraction as a decimal to a percent. (Round to the nearest tenth if necessary)

17. $\frac{12}{17}$

70.6%

18. $\frac{13}{15}$

86.7%

19. $\frac{45}{24}$

187.5%

20. $\frac{65}{80}$

81.3%

Score: 20 pts. %

2 pts ea.

8.2 I can use the percent proportion *and* percent equation to solve the problem. You must use each method 3 times and show your work for full credit.

choose 3 of each method

1. *What number is* 30% *of* 130?

$\frac{30}{100} = \frac{x}{130}$

$100x = 3900$

$x = 39$

$x = .3 * 130$

$x = 39$

2. *What percent of* 48 *is* 42?

$\frac{x}{100} = \frac{42}{48}$

$48x = 4200$

$x = 87.5\%$

$\frac{x}{100} * 48 = 42$

$\frac{x}{100} = .875$

$x = 87.5\%$

3. 16 *is* 64% *of what number?*

$\frac{16}{x} = \frac{64}{100}$

$64x = 1600$

$x = 25$

$16 = .64 * x$

$25 = x$

4. *What percent of* 120 *is* 150?

$\frac{x}{100} = \frac{150}{120}$

$120x = 15000$

$x = 125\%$

$\frac{x}{100} * 120 = 150$

$\frac{x}{100} = 1.25$

$x = 125\%$

5. *What number is* 60% *of* 25?

$\frac{60}{100} = \frac{x}{25}$

$100x = 1500$

$x = 15$

$x = .6 * 25$

$x = 15$

6. 21 *is* 42% *of what number?*

$\frac{42}{100} = \frac{21}{x}$

$42x = 2100$

$x = 50$

$21 = .42 * x$

$50 = x$

Score: 12 pts %

2 pts ea.

8.3 I can find the percent of increase or decrease. (Round to the nearest tenth if necessary)

1. From 55 to 14

$P\% = \frac{55-14}{55} = \frac{41}{55} = .7\overline{45}$

74.5% decrease

2. From 22 to 67

$P\% = \frac{67-22}{22} = \frac{45}{22} = 2.045$

204.5% increase

3. From 3 to 12

$P\% = \frac{12-3}{3} = \frac{9}{3} = 3$

300% increase

4. From 98 to 56

$P\% = \frac{98-56}{98} = \frac{42}{98} = .0485$

42.9% decrease

8.3 I can find the new amount given the percent of change and original amount.

5. Increase 45 by 16%

What is 16% of 45?

$X = .16 * 45$

$X = 7.2$

$45 + 7.2 = 52.2$

6. Decrease 40 by 20%

What is 20% of 40?

$X = .2 * 40$

$X = 8$

$40 - 8 = 32$

7. Increase 36 by 75%

What is 75% of 36

$x = .75 * 36$

$X = 27$

$36 + 27 = 63$

8. Decrease 110 by 46%

What is 46% of 110?

$X = .46 * 110$

$X = 50.6$

$110 - 56.6 = 59.4$

Score: 16 pts. %

2 pts ea.

8.4 I can use the percent of discount to find the sale price of items. I can use the percent of markup to find selling price of items.

1. Original Price: $45
   Discount: 35%
   Sale Price: ?

Sale = Original − 35% of original

$x = 45 - (.35 * 45)$

$x = 45 - (15.75)$

$x =$ $29.25

2. Wholesale Price: $5
   Markup: 12.5%
   Retail Price:?

Retail = whole sale + 12.5% of wholesale

$x = 5 + (.125 * 5)$

$x = 5 + .625$

$x =$ $5.63

3. Original Price: ?
   Discount: 20%
   Sale Price: 14

Sale price = Wholesale price * 100% − discount

$14 = W * (100 - 20\%)$

$14 = W * .8$

$17.50 = W$ (original price)

4. Wholesale Price: $12
   Markup: ?
   Retail Price: $120

Retail price = wholesale * percent

$120 = 12 * p$

$10 = p$

1000% mark up

8.4 I can calculate tax and tip on a food bill.

5. Food Bill: $72
   Tax: 7%
   Tip: 20%
   Total Bill: ?

Total = Food + Tax + Tip

$x = 72 + (.07 * 72) + (.2 * 72)$

$x = 72 + 5.04 + 14.40$

$x =$ $91.44

6. Food Bill: $18
   Tax: 6.5%
   Tip: 18%
   Total Bill:?

Total = Food + Tax + Tip

$x = 18 + (.065 * 18) + (.18 * 18)$

$x = 18 + 1.17 + 3.24$

$x =$ $22.41

Score: 12 pts. %

2 pts ea.

8.5 I can use the simple interest formula to find interest earned or paid.

1. P = $1030.00
   r = 5.4%
   t = 16 years

$I = P\ r\ t$

$= (1030)(.054)(16)$

$= \$889.92$

2. P = $2090
   r = 6.1%
   t = 12 years

$I = P\ r\ t$

$= (2090)(.061)(12)$

$= \$1529.88$

3. A = $672
   P = $600
   r = ?
   t = 6 years

$A = P + P\ r\ t$

$672 = 600 + (600)(r)(6)$

$672 = 600 + 3600r$

$72 = 3600r$

$.02 = r$

2%

4. A = $2550
   P = $1500
   r = 7%
   t = ?

$A = P + P\ r\ t$

$2550 = 1500 + (1500)(.07)t$

$2550 = 1500 + 105t$

$1050 = 105t$

$10 = t$

10 years

Score: 8 pts. %