Accelerated Math 7 Chapter 6 Practice Test

1. What number is 34% of 50? $$0.34(50) = 17$$ 34% of 100 = 34 SO 34% of 50 = 17	17
2. 88 is 110% of what number? $$\frac{88}{11} = 8 \qquad 8(10) = 80$$ $\frac{88}{x} = \frac{110}{100}$ $\frac{8800}{110} = 80$	80
3. Fifteen of 40 marbles are striped. What percent of the marbles are striped? $$\frac{15}{40} \cdot \frac{2.5}{2.5} = \frac{37.5}{100}$$ PERCENT $= \frac{PART}{WHOLE}$ $\frac{15}{40} = 37.5$	37.5%
4. A survey shows that that 65% of cat owners say their cat always come when they call it. If 15,000 cat owners were surveyed, how many people made this claim? WHAT IS 65% OF 15,000 $15000(0.65) = 9,750$	$9,750$
5. Which equation can be used to find what percent 6 is of 72? **A.** $72 = 6p$ **B.** $(72 - 6) = 100p$ **C.** $6 = 72p$ **D.** $6(72) = p$ $\frac{72}{72} \quad \frac{72}{72}$ $\frac{6}{72} = \%$ $\% = \frac{PART}{WHOLE}$	C
6. Fiona deposited $900 in the bank over 2 years. She earned $60.00 in simple interest at the end of the 2 years. What was the annual interest rate? $\frac{I}{P(T)} = \frac{P(R)(T)}{P(T)} \Rightarrow R = \frac{I}{P(T)}$ $\frac{60}{900(2)} = \frac{60}{1800} = \frac{6}{180} = \frac{1}{30} = 0.0\overline{3}$	$3\frac{1}{3}\%$ 3.3%
7. Megan's dog weighed 18lbs. when it was one year old. Now the dog weighs 25lbs. What is the percent of change in her dog's weight to the nearest hundredth? STEP 1 $25 - 18 = 7$ STEP 2 $\frac{7}{18} = 0.3\overline{8}$ 38.9% 38.889%	INCREASE 38.89%
8. An investment of $800 is **compounded** annually at 6.5%. What is the total amount of money after 2 years? SIMPLE INTEREST $800(0.065)(2) = \$104.03$ COMPOUND INTEREST YR 1 → $800(0.065) = 52$ YR 2 → $852(0.065) = \underline{55.38}$ 107.38	107.38 INTEREST 800.00 PRINCIPAL $\$907.38$

9. A store makes a profit of $12 on a hoodie after a markup of 60%. What is the selling price of the hoodie?

$$\frac{12}{x} = \frac{60}{100} \Rightarrow \frac{12}{x} = \frac{3}{5} \qquad \frac{12(5)}{3} = \frac{60}{3} = 20$$

PRICE BEFORE MARKUP

20 PRE MARKUP PRICE
+12 MARKUP
$32 SELLING PRICE

10. During peak season, boat rentals cost $80 per day. During the off-season, they cost $60 per day. What is the percent of change from peak season to off-season?

STEP 1 80 − 60 = 20   STEP 2 $\frac{20}{80} = 25\%$

25% DECREASE

11. Collin buys a pair of shoes marked $89.99. He receives a 20% discount. Which equation can be used to determine the sale price of the suit?

A. $s = 89.99(0.20)$ DISCOUNT — YOU SAVE 20%

B. $s = 89.99(1.80)$

C. $s = 89.99(0.80)$ YOU PAY 80%

D. $s = 89.99(1.20)$

C

12. A used laptop computer sells for $180, which is an 85% reduction from the original price. What was the original price of the computer?

SAVE 85%
PAY 15%

PART → $\frac{180}{x} = \frac{15}{100}$ $\frac{18000}{15} = 1200$

$1,200

13. A local meteorologist estimated 4.5 inches of snow for the month of December. The actual snowfall was 3.0 inches. What was the percent error of the estimate to the nearest percent?

STEP 1 4.5 − 3.0 = 1.5   STEP 2 $\frac{1.5}{3.0} = 50\%$ ACTUAL → 3.0

50% ERROR

14. Which fraction would be best to use to find 20% of 48 mentally?

A. $\frac{1}{5}$ **B.** $\frac{1}{4}$ **C.** $\frac{1}{3}$ **D.** $\frac{1}{2}$

A

15. Manny deposits $275 into an account that earns 2.5% **simple** interest. Justina deposits $225 into an account that earns 6% **simple** interest. How much money is in each account after 10 years? At those interest rates, how many years would it be before Justina has more money than Manny?

MANNY → 275(0.025)(10) = 68.75

JUSTINA → 225(0.06)(10) = 135

$275 + 275(0.02)(x) = 225 + 225(0.06)(x)$

$275 + 6.875x = 225 + 13.5x$
$-6.875x \qquad\qquad -6.875x$

275
225

50

225 + 6.625x
225

6.625x

$\frac{50}{6.625} = \frac{6.625x}{6.625}$

7.55 = x

Manny (10 yrs)	$343.75
Justina (10 yrs)	$360
Years till Justina has more total money than Manny.	7.55 YEARS