

CHAPTER

5

Test

1. Write the percent proportion and the percent equation. Explain the meaning of P , B , r , and R .
2. Compare and contrast experimental probability and theoretical probability.

Solve each proportion.

3. $\frac{3}{x} = \frac{12}{16}$

4. $\frac{9}{y} = \frac{15}{10}$

5. $\frac{x}{5} = \frac{x+2}{6}$

6. $\frac{3}{3n+2} = \frac{3}{8}$

Find each number.

7. 20% of 40 is what number?
 8. 12 is what percent of 60?
 9. 20 is what percent of 16?
 10. 23 is 25% of what number?
 11. Find 120% of 32.
 12. What is 35% of 60?
13. **Measurement** Convert 42 inches to feet.
14. **Recycling** When 2000 pounds of paper are recycled or reused, 17 trees are saved. How many trees would be saved if 8000 pounds of paper are recycled?
15. **Hobbies** Model railroads are scaled-down models of real trains. The scale on an HO model train is 1 inch = 87 inches. An HO model of a modern diesel locomotive is 8 inches long. How long is the real locomotive?
16. **Banking** How long will it take Mr. Roberts to earn \$1500 if he invests \$5000 at a rate of 6%?
17. **Shopping** The Just Skates sporting goods store advertises that all in-line skates are on sale for 20% off the regular price. Find the sale price of a pair of skates that cost \$160.
18. **Taxes** What is the cost of a pair of jeans that sells for \$49 if the sales tax rate is 6%?
19. **Sports** A quarterback threw 18 completed passes out of 30 attempts. Find the experimental probability of making a completed pass. Express the probability as a percent.
20. **Probability** A die is rolled. What is the probability of rolling a 5 or a number greater than 3?



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1) $\frac{A}{B} = \frac{P}{100}$ "pArt is % of Base"

2) Experimental \rightarrow what actually happens
Theoretical \rightarrow what should happen

3) $x = 4$

4) $y = 6$

5) $x = 10$

6) $A = 2$

7) $A = 8$

8) $p = 20\%$

9) $p = 125\%$

10) $B = 92$

11) $A = 38.4$

12) $A = 21$

13) 3.5 ft or $3\frac{1}{2}$ ft

14) $t = 68$ trees

15) Actual length = 696 in.

16) $t = 5$ years

17) Sale price = \$128

18) Total Cost = \$51.94

19) Experimental Probability = 60%

20) $P(5 \text{ or } >3) = \frac{1}{2}$