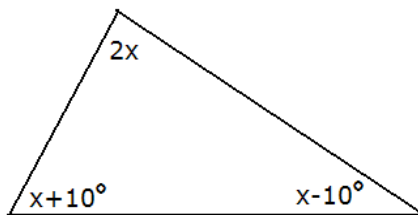


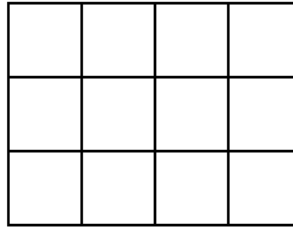
Review Problems

- We asked 50 students whether they watch TV and/or listen to radio. 38 students claimed that they watch TV, and 31 students claimed that they listen to radio. If 25 students watch TV and listen to radio, how many students do neither of these activities?
- Let $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$, $A = \{1, 2, 4, 6, 9, 10\}$, $B = \{2, 3, 4, 8, 10\}$, and $C = \{2, 7, 8, 10\}$. Find each of the following.
 - $\overline{A \cap B \cup C}$
 - $\overline{A} \cap (B \cup \overline{C})$
 - $(\overline{A} \cap B) \cup \overline{C}$
- Suppose that A and B are sets with $|A| = 17$, $|A \cup B| = 27$, and $|A \cap B| = 11$. Find the value of $|B|$.
- How many 5-digit numbers are there if
 - Repetition of digits is allowed?
 - Repetition of digits is not allowed?
- Find the value of x based on the picture below.



- Find the measure of an inner angle of a regular polygon with 20 sides.
- The supplement of an angle is 15° less than twice the angle. Find the angle. (Two angles are supplements of each other if their sum is 180° .)
- A class has 18 girls and 15 boys. How many ways can we select a female president, male vice president, and male treasurer?
- We toss a coin 6 times in a row. (a possible outcome is a 6-chain such as TTTHTH.)
 - How many different outcomes are possible?
 - List all possible outcomes that contain exactly one heads and five tails.
- List all 3-element subsets of the set $S = \{1, 2, 3, 4, 5, 6\}$
- Solve each of the following basic percent problems.
 - 40 is what percent of 16?
 - 42% of a number is 63. Find this number.
 - Compute 35% of 200.
- A living room set went on a 15% sale. The sale price is \$765. How much was the original price?
- The bacteria sample grew overnight, so the number of bacteria increased by 250%. If now there are 1750 000 bacteria in the sample, how many were there yesterday?

14. Consider the figure shown on the picture below.



- a) How many rectangles are there on the picture?
 b) How many squares are there on the picture?

Review Problems - Answers

- 1.) 6 2.) a) {5} b) {3, 5, 8} c) {1, 3, 4, 5, 6, 8, 9} 3.) 21
- 4.) a) $9(10)^4 = 90\,000$ b) $9 \cdot 9 \cdot 8 \cdot 7 \cdot 6 = 27\,216$ 5.) 45° 6.) 162° 7.) 65°
- 8.) $18(15)14 = 3780$
- 9.) a) 64 b) TTTTTH, TTTTHT, TTTHTT, TTHTTT, THTTTT, and HTTTTT
- 10.)
 {1, 2, 3} {1, 3, 4} {1, 4, 5} {1, 5, 6} {2, 3, 4} {2, 4, 5} {2, 5, 6} {3, 4, 5} {3, 5, 6} {4, 5, 6}
 {1, 2, 4} {1, 3, 5} {1, 4, 6} {2, 3, 5} {2, 4, 6} {3, 4, 6}
 {1, 2, 5} {1, 3, 6} {2, 3, 6}
- 11.) a) 250% b) 150 c) 70 12.) \$900 13.) 500 000 14.) a) 60 b) 20