MATH 5: HANDOUT 2
Review and Warm-Up Problems

Review Topics

- Speed-time-distance.
- Basics of geometry: angles, quadrilaterals, areas.
- Negative numbers.
- Laws of arithmetics.
- Equations.

Homework

1. A motorboats still-water speed is 9 mph.

    (a) Two towns A and B are 12 miles apart on a lake (no current). How long for a round trip $A \to B \to A$?

    (b) Two other towns C (upstream) and D (downstream) are 12 miles apart on a river with current 3 mph. How long from $C \to D$? from $D \to C$?

2. Lines ℓ and m are perpendicular. A third line t makes a $35°$ angle with ℓ on one side of ℓ.

    (a) List all acute and obtuse angles formed at the intersection points in terms of $35°$.

    (b) What is the measure of the angle that t makes with m on each side of m?

3. In parallelogram $ABCD$, $\angle A = 68°$. The diagonal AC is drawn.

    (a) Find $\angle ABC$ and $\angle BAD$.

    (b) If $\angle$ between AC and side AB is $22°$, find the angle between AC and side BC.

4. (a) Triangle with base $b = 14$ cm and height $h = 9$ cm.

    (b) Parallelogram with base $b = 18$ cm and height $h = 11$ cm.

    (c) A 20×15 cm rectangle has a right triangle with legs 8 cm and 6 cm cut out from one corner. Find the remaining area.

5. Compute:
    (a) $(-8) + (-11)$ (b) $5 + (-9) + (-12)$ (c) $(-15) + 7 + (-4)$

6. Compute:
    (a) $(-9) \div (-3) + 5$ (b) $(-5) \div 2$ (c) $(-6) \times (-7) \div 8$

7. Solve:
    (a) $(-3) \cdot x = -10$ (b) $(-4) \cdot x + 5 = x - 19$

8. Simplify:
    (a) $3(x + y) - 2(x - y)$ (b) $2 - 3\bigl(1 - 2(2 - 3x)\bigr)$

9. Solve:
    (a) $6(x - 3) = 36$ (c) $(-3x) + 4 - (-6x) - (-10) = -(-2)$

    (b) $5x - 7 = 2x + 11$