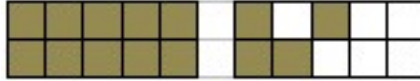# Math 8 Math Basics Review

Directions: Answer all questions on a separate piece of paper. Show all of your work. Answer in simplified lowest terms.

1. **What fraction is represented in the diagram below?**

2. **Write the following fractions in lowest terms.**

   a. $\dfrac{30}{36}$

   b. $\dfrac{21}{56}$

   c. $\dfrac{8}{12}$

   d. $\dfrac{28}{36}$

3. **Write the following improper fractions as mixed numbers, in lowest terms.**

   a. $\dfrac{25}{10}$

   b. $\dfrac{51}{8}$

   c. $\dfrac{30}{8}$

   d. $\dfrac{34}{24}$

4. **Write the following mixed numbers as improper fractions, in lowest terms.**

   a. $7\dfrac{3}{15}$

   b. $3\dfrac{6}{24}$

   c. $1\dfrac{15}{24}$

   d. $2\dfrac{33}{36}$

5. **Find the product using long multiplication.**

   a. 312×6

   b. 629×47

   c. 774×8

   d. 585×271

6. **Find the quotient and remainder using long division.**

    a. $673 \div 4$ c. $973 \div 8$

    b. $412 \div 3$ d. $422 \div 16$

7. **Find the sum or difference:**

    a. $(-9) + (4) =$ _____   d. $(-7) + (+6) =$ _____

    b. $(+3) + (-12) =$ _____   e. $(-6) + (+12) =$ _____

    c. $0 + (-18) =$ _____   SEP   f. $(-8) + (-5) =$ _____

8. **Find the product or quotient:**

    a. $45 \div 9 =$ _____   d. $(-12) \times (-7) =$ _____

    b. $(-6) \times 11 =$ _____   e. $(+54) \div (-9) =$ _____

    c. $(+32) \div (-4) =$ _____   f. $(+5) \times (+7) =$ _____

9. **Solve:**

    a. $12 \times (-3) + 20 \div 2$ e. $(-56) \div [14 - (+6)] \times 2$

    b. $[(-12) - (-8)] \times [2 + (-6)]$ f. $(11 - 4) \times (3 - (-4))$

    c. $36 \div (-3 + 4 \times 3) - 4$ g. $(-6 + 7 \times 8) \div (-4 + 2)$

    d. $6 \times [-5 - (-3)] \div (-2)$ h. $\dfrac{2 \times (6+4) + (-4)}{-4 + (-2) \times (-1)}$

10. **An ice hockey player gets a rating of -3 in four consecutive games, and then a plus/minus of zero in the fifth game.**

    a) **What is his total plus/minus rating?**
    b) **What is his average plus/minus rating?**

11. **The average temperature in Calgary, Alberta, over 7 days, is recorded as: 11°, 4°, 7°, 4°, -3°, -9°, and 0°. What is the average temperature?**

12. **A banker deposits (puts in) $50 per week for 12 weeks, and withdraws (takes out) $70 per week for 6 weeks. Then, he uses half of the money to make a payment.**

    a) **Write an equation to express the amount of money he has left.**
    b) **How much money does he have left?**