

Prerequisite Math Practice for Dental Hygiene Program:

Basic Operations on Integers:

1. Evaluate: $2(4 - 6) + 3 =$
2. Evaluate: $(6 - 12) + (15 + (4 - 20)) =$
3. Evaluate: $4 - 6 \div 2 \cdot -3 + 5 =$
4. Evaluate: $(12 - 7)^2 \div 5 - 2 =$

Basic Operations on Fractions:

5. Evaluate: $\frac{5}{4} + \frac{9}{8} =$
6. Evaluate: $\frac{2}{7} - \frac{3}{5} =$
7. Evaluate: $\frac{5}{9} \cdot \frac{3}{10} =$
8. Evaluate: $\frac{11}{15} \div \frac{22}{3} =$
9. Evaluate: $\frac{4}{5} \left(\frac{2}{3} - \frac{7}{6} \right) + \left(\frac{1}{2} \div \frac{5}{8} \right) =$

Ratios:

10. A pattern has 3 blue triangles to every 18 yellow triangles. What is the ratio of yellow triangles to blue triangles?
11. A bag contains 9 red marbles and 7 blue marbles. What is the ratio of red marbles to the total marbles?
12. A pattern has 5 blue triangles to every 20 yellow triangles. What is the ratio of yellow triangles to all triangles?

Convert Between Fractions (Ratios), Decimals and Percents:

13. Write $\frac{4}{5}$ as a decimal and percent

14. Write 35% as a decimal and a fraction

15. Write 1.25 as a percent and a fraction

Comparing Fractions and Decimals: use <, > or = to compare each of the following

16. $\frac{15}{4}$ $\frac{16}{11}$

17. $\frac{6}{5}$ $\frac{30}{25}$

18. 0.012 0.12

19. 1.201 1.015

Calculations with Percents:

20. What is 25% of 60?

21. 45 is what percent of 130?

22. A 40% increase of 30 is how much?

23. A decrease from 70 to 36 is what percent?

Solving Proportions Word Problems:

24. If there is \$15 in a drawer and the ratio of money in the drawer to money in the piggy bank is 3:5, then how much money is in the piggy bank?

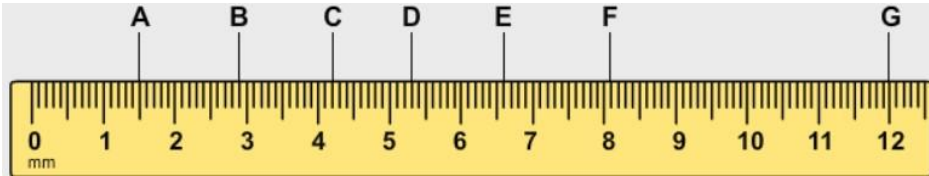
25. You have 10 apples and the ratio of apples to oranges is 5:2, so how many oranges do you have?

26. Knowing there are 2.2 pounds in one kilogram, how many kilograms does a person weigh if they are 165 pounds?

27. Knowing there are 2.2 pounds in one kilogram, how many pounds does a person weigh if they are 62 kilograms

28. Knowing there are 60 drops in a teaspoon, how many teaspoons are 105 drops?

Reading a Ruler:



29. Length A is _____ mm

30. Length B is _____ mm

31. Length C is _____ mm

32. Length D is _____ mm

33. Length E is _____ mm

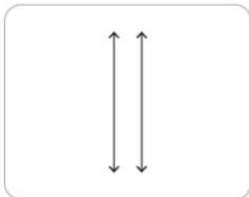
34. Length F is _____ mm

35. Length G is _____ mm

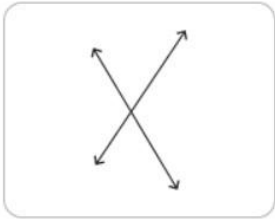
Parallel and Perpendicular Lines:

Name the following pairs of lines as parallel, perpendicular, or intersecting lines

36.



37.



38.

