Prerequisite Math Practice Test for Radiography:

Basic Operations on Integers:

1. Evaluate: $2(4-6)+3=$

2. Evaluate: $(6-12)+\big(15+(4-20)\big)=$

3. Evaluate: $4-6\div 2\cdot -3+5=$

4. Evaluate: $(12-7)^2\div 5-2=$

Ratios:

5. A pattern has 3 blue triangles to every 18 yellow triangles. What is the ratio of yellow triangles to blue triangles?

6. A bag contains 9 red marbles and 7 blue marbles. What is the ratio of red marbles to the total marbles?

7. 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:

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

9. Write 35% as a decimal and a fraction

10. Write 1.25 as a percent and a fraction

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

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

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

13. 0.012 0.12
14. 1.201 1.015

Calculations with Percents:

15. What is 25% of 60?

16. 45 is what percent of 130?

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

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

Conversions:

19. Convert 3.5 feet to inches

20. Convert 4 inches to centimeters

21. Convert 27 centimeters to millimeters

22. Convert 62 millimeters to inches

23. Convert 1.38 liters to kiloliters

24. Convert 1.5 gallons to cups

25. Convert $70°F$ to Celsius

26. Convert $22°C$ to Fahrenheit

Solving Proportions Word Problems:

27. 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?

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

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

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

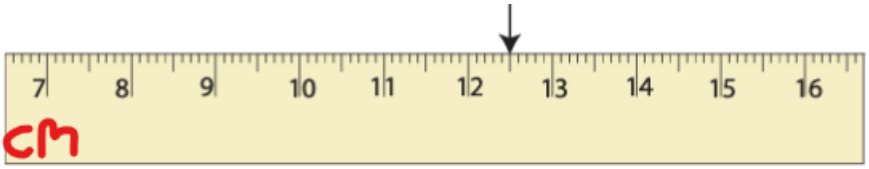
31. Knowing there are 60 drops in a teaspoon, how many teaspoons are 105 drops?

Reading a ruler: give the measurements indicated by the pointer

32.

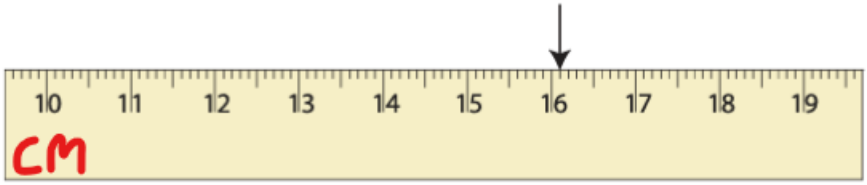
33.

34.



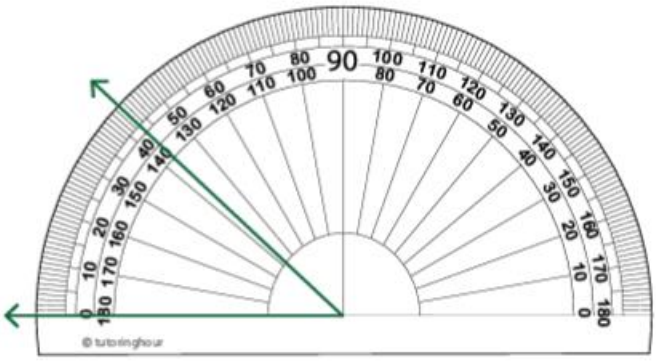
cm: _____ mm: _____

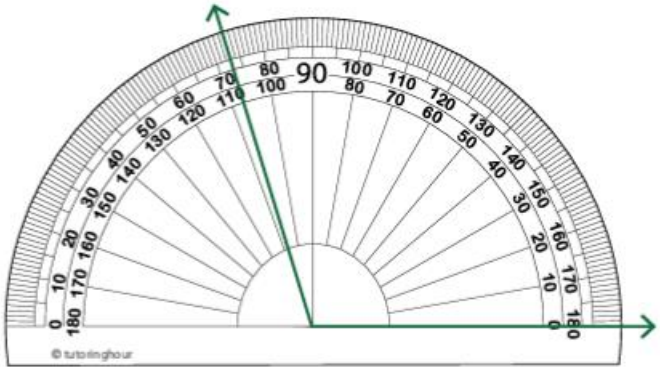
35.



cm: _____ mm: _____

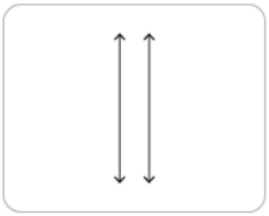
Reading a Protractor:

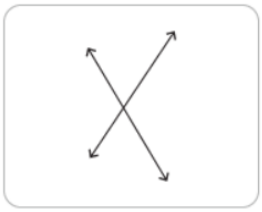
36. 

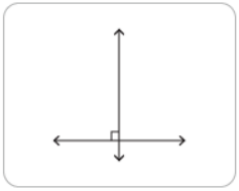
37. 

Parallel and Perpendicular Lines:

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

38. 

39. 

40. 

Solving: find the value of x that makes the equation true

41. $x + 6 = 10$

42. $-5 + x = 12$

43. $4x = -8$

44. $\frac{2}{3}x = 5$

45. $-x - 6 = 15$

46. $6x + 2 = 14$

47. $4(x - 5) = 2$

48. $\frac{3}{x} = \frac{27}{18}$

49. $\frac{x}{1.2} = \frac{4.6}{8.3}$

50. $\frac{4.22}{0.2} = \frac{x}{1.68}$