Name: $\qquad$

## Unit 2 - Measurement

## 2.3 - Imperial Measurement System

- the imperial system is a measurement system that is still in use in industry and the trades.
- as compared to the metric system, there is no consistent multiple between the units.
- the relationships between common imperial units are given below.
a) 1 foot $(\mathrm{ft})=$ $\qquad$ inches (in)
b) 1 yard $(y d)=$ $\qquad$ feet $(\mathrm{ft})=$ $\qquad$ inches (in)
c) 1 mile $(\mathrm{mi})=$ $\qquad$ yards $(y d)=$ $\qquad$ feet (ft)
- the above relationships can be summarized in the diagram below

- when converting between imperial units, multiply or divide by the conversion factor
- complete the following table to indicate the method of conversion between imperial units

| Starting unit | Finishing unit | Conversion factor |
| :---: | :---: | :---: |
| mi | yd |  |
| mi | ft |  |
| mi | in |  |
| yd | mi |  |
| yd | ft |  |
| yd | mi |  |
| ft | yd |  |
| ft | in |  |
| ft | mi |  |
| in | yd |  |
| in |  |  |

- we should $\qquad$ when converting from a large unit to a smaller unit
- we should $\qquad$ when converting from a small unit to a larger unit
e.g. Indicate the conversions factors used in each question. Leave all answers in to the nearest tenth (when necessary).


1) $36 \mathrm{ft}=$ $\qquad$ yd
2) 42 in $=$ $\qquad$ ft
$\qquad$
3) $2 \mathrm{mi}=$ ft $\qquad$ mi
4) $5 y d=$ $\qquad$ in
5) $312000 \mathrm{in}=$ $\qquad$ mi

## Assignment

Convert the following imperial measurements. Leave answers in TWO decimal when necessary.


1. 1.7 miles $=$ $\qquad$ feet
2. 812 inches $=$ $\qquad$ yards
3. 38.7 yards $=$ $\qquad$ feet
4. 1018.7 yards $=$ $\qquad$ miles
5. 507 inches $=$ $\qquad$ feet
6. 10500 feet $=$ $\qquad$ miles
7. 8000 miles $=$ $\qquad$ inches
8. 54.7 feet $=$ $\qquad$ yards
9. 11.2 yards $=$ $\qquad$ inches

10. 4.5 miles $=$ $\qquad$ yards
11. 8358 inches $=$ $\qquad$ miles
12. 14.7 yards $=$ $\qquad$ feet
13. 4908 inches $=$ $\qquad$ yards
14. 5.3 miles $=$ $\qquad$ inches
15. 4200 feet $=$ $\qquad$ yards
16. 4.32 miles $=$ $\qquad$ feet
17. 105000 inches $=$ $\qquad$ miles
18. 47.9 feet $=$ $\qquad$ inches
19. 3500 yards $=$ $\qquad$ miles
20. 50000 feet $=$ $\qquad$ miles
21. 256 inches $=$ $\qquad$ feet
22. 5000 yards $=$ $\qquad$ inches
23. 19.7 miles $=$ $\qquad$ yards
