

Name:

### Final Exam Review Pack – Section 2

- Remember to set up your ratios using multiplication so the units cancel top and bottom.
- Then multiply across and divide the last ratio if necessary.
- Cancel the Units!!

Ratio (Read Top <b>per</b> Bottom)
$\frac{1cm}{10mm} \leftrightarrow \frac{10mm}{1cm}$
$\frac{1m}{100cm} \leftrightarrow \frac{100cm}{1m}$
$\frac{1km}{1000m} \leftrightarrow \frac{1000m}{1km}$

Ratio (Read Top <b>per</b> Bottom)
$\frac{1mi}{1760yds} \leftrightarrow \frac{1760yds}{1mi}$
$\frac{1mi}{5280ft} \leftrightarrow \frac{5280ft}{1mi}$
$\frac{1yd}{3ft} \leftrightarrow \frac{3ft}{1yd}$
$\frac{1ft}{12in} \leftrightarrow \frac{12in}{1ft}$

Ratio (Read Top <b>per</b> Bottom)
$\frac{1mi}{1.609km} \leftrightarrow \frac{1.609km}{1mi}$
$\frac{1ft}{0.305m} \leftrightarrow \frac{0.305m}{1ft}$
$\frac{1in}{2.54cm} \leftrightarrow \frac{2.54cm}{1in}$

Ratio (Read Top <b>per</b> Bottom)
$\frac{1t}{1000kg} \leftrightarrow \frac{1000kg}{1t}$
$\frac{1kg}{1000g} \leftrightarrow \frac{1000g}{1kg}$
$\frac{1g}{1000mg} \leftrightarrow \frac{1000mg}{1g}$
$\frac{1T}{2000lb} \leftrightarrow \frac{2000lb}{1T}$
$\frac{1lb}{16oz} \leftrightarrow \frac{16oz}{1lb}$
$\frac{1g}{0.04oz} \leftrightarrow \frac{0.04oz}{1g}$
$\frac{1kg}{2.21lb} \leftrightarrow \frac{2.21lb}{1kg}$
$\frac{1t}{1.1T} \leftrightarrow \frac{1.1T}{1t}$

Ratio (Read Top <b>per</b> Bottom)
$\frac{60sec}{1min} \leftrightarrow \frac{1min}{60sec}$
$\frac{60min}{1hr} \leftrightarrow \frac{1hr}{60min}$
$\frac{1day}{24hr} \leftrightarrow \frac{24hr}{1day}$
$\frac{7day}{1week} \leftrightarrow \frac{1week}{7day}$
$\frac{52week}{1year} \leftrightarrow \frac{1year}{52week}$
$\frac{365days}{1year} \leftrightarrow \frac{1year}{365days}$

Fahrenheit to Celsius	Celsius to Fahrenheit
$F = \frac{9}{5}C + 32$	$C = \frac{5}{9}(F - 32)$

- When converting **across systems** of units (metric to imperial, etc.)
- Make the conversion at the **smallest unit of measure** (*oz – g, cm – in*)

**Convert the following measurements to centimeters.**

1. 1978 *km*

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2. 4.3 *miles*

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3. 2378 *yards*

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4. 750.5 *ft*

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5. 0.0015 *yards*

**Convert the following measurements to feet.**

6. 32 690 *miles*

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7. 0.67 *km*

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8. 1 578 000 *mm*

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9. 9.7 *cm*

**Convert the following measurement to miles.**

10. 89 065 *in*

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11. 47 890 *cm*

12.  $0.690\text{ m}$

**Convert the following measurements to meters.**

13.  $12\text{ miles}$

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14.  $18\,765\text{ in}$

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15.  $49.54\text{ yds}$

**Perform the following MASS conversions.**

16. Convert  $3.7T$  to *Ounces*

17. Convert  $18.9\text{lbs}$  to *milligrams*

18. Convert  $24.8\text{kg}$  to *pounds*

19. Convert  $17\ 259\text{oz}$  to *tonnes (Metric)*

20. Convert  $7.5\text{T}$  to *milligrams*

**Perform the following TIME conversions.**

21. How many *seconds* are in  $14\ \text{days}$ ?

22. How many *weeks* are in 5 *years*?

23. How many *minutes* in the *months of June, July and August*?

24. How many *seconds* are in the first 4 *months of the year*? (Non-leap year)

**Perform the following TEMPERATURE conversions**

25. How hot is 165°F in °C?

26. What is 32°C in °F?

**Perform the following conversions of MULTIPLE UNITS.**

27. If I can run at  $5\text{km/hr}$  how fast am I going in  $\text{m/s}$ ?
28. You watch an ant move  $12\text{cm}$  in  $2\text{seconds}$ , how fast is it travelling in  $\text{km/hr}$ ?
29. How fast is  $7900\text{km/h}$  in  $\text{miles/min}$ ?
30. If you are strong enough to push an object, with constant acceleration at  $5\text{ meters/sec}$ , how far can you push it in  $2\text{ days}$ ?