

Y10 Maths Weekly Task Grid – Week commencing 6<sup>th</sup> July

This week's topic focus is **Functions**. Please complete all 4 tasks.

**Starter:****RATIO AND PROPORTION**

A is directly proportional to B.  
When A = 28, B = 7.

- Find an equation for A in terms of B.
- Find A when B = 12
- Find B when A = 13

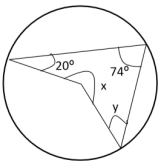
**SIMPLIFY/ RE-ARRANGE/ SOLVE**

Make x the subject:

$$ax + b = cx + d$$

**ANGLES & CIRCLE THEOREMS**

Find x and y.

**SURDS**

- Simplify  $\sqrt{18}$

- Hence, simplify  $\frac{\sqrt{18} + \sqrt{8}}{\sqrt{200}}$

Enlarged on the next page

**Video on how to do it**

You can choose which video you want to watch to show you how to do

[Functions Lesson 1 - Mymaths](#) (concentrate on understanding this one!)

[Functions Lesson 2 - Mymaths](#) (only do this one when you fully understand lesson 1)

Or

[Functions Video - Maths Genie](#) (Best one to use in my opinion but do what works best for you)

Or

[Function Machines Recap video - Corbett Maths](#)

[Inverse Functions Video - Corbett Maths](#)

[Composite Functions Video - Corbett Maths](#)

**Practice Questions**

You can choose which questions you want to use to practice. The links to the answers are also provided so you can check them when you are finished.

[Functions Homework 1 - My Maths](#) (Again, concentrate on this one!)

[Functions Homework 2 - My Maths](#) (only do this one when you fully understand lesson 1)

[Functions Practice Questions - Corbett Maths](#)

[Functions ANSWERS - Corbett Maths](#)

**Exam Question (Higher):**

On the next page is an exam question for you to have a go at...

**RATIO AND PROPORTION**

A is directly proportional to B.

When  $A = 28$ ,  $B = 7$ .

- a) Find an equations for A in terms of B.
- b) Find A when  $B = 12$
- c) Find B when  $A = 13$

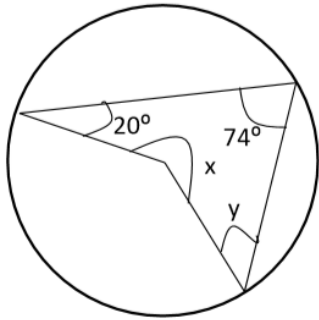
**SIMPLIFY/ RE-ARRANGE/ SOLVE**

Make x the subject:

$$ax + b = cx + d$$

**ANGLES & CIRCLE THEOREMS**

Find x and y.

**SURDS**

- a) Simplify  $\sqrt{18}$

- b) Hence, simplify  $\frac{\sqrt{18} + \sqrt{8}}{\sqrt{200}}$

1. Given  $f(x) = \frac{2x+1}{3}$

(a) Calculate the value of  $f(7)$

(b) Find  $f^{-1}(x)$

.....  
(1)

.....  
(2)

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2. The functions  $f(x)$  and  $g(x)$  are given by the following:

$$f(x) = 3x - 1$$

$$g(x) = 2x + 4$$

(a) Calculate the value of  $fg(2)$

.....  
(2)

(b) Calculate the value of  $ff(3)$

.....  
(2)

(c) Find  $gf(x)$

.....  
(2)

3. The functions  $f(x)$ ,  $g(x)$  and  $h(x)$  are given by the following:

$$f(x) = x^2 - 3$$

$$g(x) = 2x + 1$$

$$h(x) = \frac{x}{2}$$

- (a) Find  $fg(x)$

.....  
(2)

- (b) Find  $gh(x)$

.....  
(2)

- (c) Find  $h^{-1}(x)$

.....  
(2)

- 
4. The function  $f$  is such that  $f(x) = 4x - 7$

- (a) Solve  $f(x) = 17$

.....  
(2)

- (b) Find  $f^{-1}(x)$

.....  
(2)