Numeracy Homework

Due date:_____

At St. Peter's we are committed to developing children's core mathematical skills and concepts. This includes their multiplication and division facts as they move through school. This pack is designed to help children develop their multiplication and knowledge up to 12x12.

Children should complete at least two grids per week and have their time noted above the grid. When children have completed the grids in one step, they may be ready to move on to the next step.

As well as completing the grids, we want children to start to apply their multiplication knowledge to a range of contexts. Therefore there are stages in the booklet that ask children to find common factors and common multiples. Following learning at school children should be able to explain these terms to you but feel free to ask your child's class teacher if you are unsure.

To help children develop this you could ask them questions different to the ones contained in the booklet to help them master their application of multiplication and division knowledge, for example:

What are the common multiples of 3 and 4?

What is the highest common factor of 24 and 36?
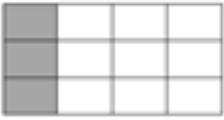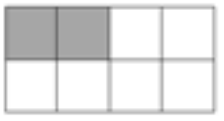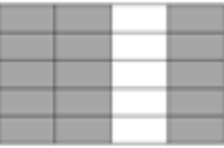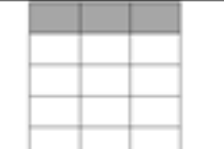
Find the lowest common multiple of 8 and 12.

Can you tell me a prime number lower than 20?

It is important to encourage children to use the correct vocabulary when discussing maths concepts as this will help them master each times table. Please remember to cover a completed grid before children start on the next one!

If you have any questions regarding this homework, or would like extra grids for different steps, please speak to your child's class teacher.
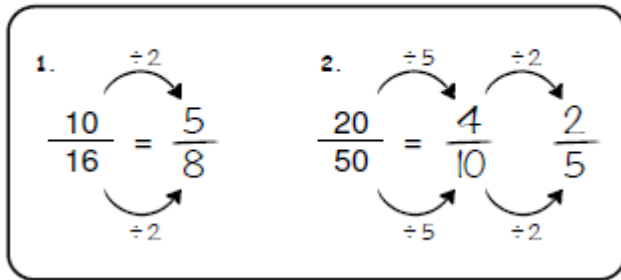
Use the table below and your knowledge of multiples and factors to simplify the following fractions. Then explain how you know you have found the simplest form.

Shape	Shaded Fraction	Common factor	Simplest Fraction	How do you know this is the simplest form?
	$\dfrac{3}{12}$	3	$\dfrac{1}{4}$	The number 1 and four cannot be divided by any other number than 1. They only have a common factor of 1.
	$\dfrac{\square}{\square}$		$\dfrac{\square}{\square}$	
	$\dfrac{\square}{\square}$		$\dfrac{\square}{\square}$	
	$\dfrac{\square}{\square}$		$\dfrac{\square}{\square}$	
	$\dfrac{\square}{\square}$		$\dfrac{\square}{\square}$	
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Stage 6.4

Simplify the following fractions using your knowledge of common factors.

Examples:

1.

$$\frac{10}{16} = \frac{5}{8} \quad \div 2$$

2.

$$\frac{20}{50} = \frac{4}{10} \quad \frac{2}{5} \quad \div 5 \quad \div 2$$

1. $\dfrac{2}{4}$

2. $\dfrac{35}{40}$

3. $\dfrac{3}{6}$

4. $\dfrac{18}{20}$

5. $\dfrac{4}{36}$

6. $\dfrac{5}{35}$

7. $\dfrac{3}{30}$

8. $\dfrac{44}{48}$

9. $\dfrac{2}{4}$

10. $\dfrac{10}{45}$

11. $\dfrac{6}{14}$

12. $\dfrac{4}{28}$

13. $\dfrac{5}{15}$

14. $\dfrac{4}{32}$

15. $\dfrac{25}{60}$

Simplify the following fractions using your knowledge of common factors.

$\dfrac{18}{20} =$

$\dfrac{14}{24} =$

$\dfrac{3}{30} =$

$\dfrac{4}{40} =$

$\dfrac{10}{45} =$

$\dfrac{2}{6} =$

$\dfrac{5}{15} =$

$\dfrac{45}{50} =$

Stage 6.4

Simplify the following fractions using your knowledge of common factors.

1) $\dfrac{6}{18}$

2) $\dfrac{8}{12}$

3) $\dfrac{18}{24}$

4) $\dfrac{21}{28}$

11) $\dfrac{40}{48}$

12) $\dfrac{4}{28}$

13) $\dfrac{18}{63}$

14) $\dfrac{16}{28}$

21) $\dfrac{63}{72}$

22) $\dfrac{6}{54}$

23) $\dfrac{8}{72}$

24) $\dfrac{12}{54}$

Simplify the following fractions using your knowledge of common factors.

5) $\dfrac{12}{30}$

6) $\dfrac{12}{20}$

7) $\dfrac{21}{35}$

15) $\dfrac{40}{56}$

16) $\dfrac{24}{28}$

17) $\dfrac{36}{42}$

25) $\dfrac{35}{63}$

26) $\dfrac{28}{36}$

27) $\dfrac{64}{72}$

Simplify the following fractions using your knowledge of common factors.

$$\frac{12}{108} \qquad \frac{49}{84} \qquad \frac{63}{96} \qquad \frac{72}{90}$$

$$\frac{49}{91} \qquad \frac{60}{108} \qquad \frac{72}{144} \qquad \frac{77}{121}$$

$$\frac{56}{98} \qquad \frac{54}{96} \qquad \frac{48}{121} \qquad \frac{84}{144}$$

$$\frac{56}{98} \qquad \frac{66}{96} \qquad \frac{35}{105} \qquad \frac{21}{91}$$

Simplify the following fractions using your knowledge of common factors.

$$\frac{65}{105} \qquad \frac{45}{65} \qquad \frac{49}{91} \qquad \frac{64}{104}$$

$$\frac{96}{112} \qquad \frac{96}{136} \qquad \frac{56}{133} \qquad \frac{42}{112}$$

$$\frac{56}{112} \qquad \frac{36}{102} \qquad \frac{42}{114} \qquad \frac{64}{152}$$

$$\frac{16}{68} \qquad \frac{24}{76} \qquad \frac{55}{95} \qquad \frac{72}{153}$$

Convert these mixed numbers to improper fractions using your multiplication and division knowledge.

$3\frac{1}{6}$ $\qquad$ $2\frac{3}{7}$ $\qquad$ $4\frac{5}{8}$ $\qquad$ $6\frac{3}{4}$

$3\frac{2}{3}$ $\qquad$ $4\frac{5}{6}$ $\qquad$ $2\frac{4}{5}$ $\qquad$ $5\frac{5}{8}$

$3\frac{7}{8}$ $\qquad$ $5\frac{3}{5}$ $\qquad$ $2\frac{7}{9}$ $\qquad$ $3\frac{2}{6}$

$4\frac{4}{7}$ $\qquad$ $3\frac{7}{8}$ $\qquad$ $2\frac{5}{6}$ $\qquad$ $7\frac{4}{9}$

Convert these improper fractions to mixed numbers using you multiplication knowledge.

$\dfrac{27}{6}$

$\dfrac{44}{7}$

$\dfrac{35}{8}$

$\dfrac{26}{4}$

$\dfrac{35}{3}$

$\dfrac{49}{6}$

$\dfrac{42}{5}$

$\dfrac{91}{8}$

$\dfrac{49}{8}$

$\dfrac{42}{5}$

$\dfrac{24}{9}$

$\dfrac{88}{6}$

$\dfrac{28}{7}$

$\dfrac{52}{8}$

$\dfrac{85}{6}$

$\dfrac{54}{9}$