

HELP YOUR CHILD WITH ENGLISH AND MATHEMATICS

Brine Leas School

November 2018

SUPPORTING YOUR CHILD WITH MATHEMATICS

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- ▶ At Brine Leas we believe all pupils can develop the skills and knowledge needed to succeed in Mathematics. Quality first teaching by specialist Maths teachers is supplemented by clubs, inter-house and inter-school competitions and online resources which support your child every step of the way.

DEPARTMENTAL ETHOS...



- ▶ Hegarty Maths
- ▶ Times Tables Rockstars

ONLINE RESOURCES



- ▶ Hegarty is an online platform with detailed videos on all aspects of Maths, from KS2 to KS4. Each video has an associated quiz which pupils can take as often as they need to.
- ▶ Each pupil is set one Hegarty homework per week. It's set on a Monday at 3:15 pm and is due the following Monday at 1:15.
- ▶ The homework is usually a revision of previous work.
- ▶ Pupils are expected to take full notes on the video, including writing out the key words, and then complete the quiz in their Hegarty exercise book.
- ▶ We recommend that pupils complete extra Hegarty work when struggling with classwork and when preparing for tests and examinations.
- ▶ We keep a record of the amount of work each pupil completes and pupils who do the most work are rewarded in school.

HEGARTY MATHS



- ▶ Taking detailed notes promotes understanding.
- ▶ Pupils can refer back to their notes or the video when completing the quiz.
- ▶ Pupils take the quiz as often as they need to get high marks.

HIGH STANDARD
OF HOMEWORK

Clip N° Symmetry of Subtraction Percentage = 100%

21/10/18
Key words: Symmetry, Commutative, Subtraction, Negative

① $4 + 1 = 5$ ⑤ $17 - 3 = 14$
 $1 + 4 = 5$ $3 - 17 = -14$

② $4 - 1 = 3$ ④ $20 - 49 = -29$
 $1 - 4 = -3$

③ $7 - 16 < 2 - 10$ ⑥ $0 - 5 = -5$
 $0 - 12 = -12$
 $0 - 1, + 57 = 114$

Quiz

① $76 - 71 = 5$ ⑦ $54 - 74 = -20$

③ $51 - 44 = 7$ ④ $46 - 89 = -43$ ⑧ $20 - 31 = -11$

② $34 - 50 = -16$ ⑨ $31 - 81 = -50$ ⑩ $59 - 65 = -6$

⑤ $38 - 42 = -4$ ⑥ $12 - 25 = -13$

⑦ $59 - 65 = -6$

⑧ $20 - 31 = -11$

⑩ $12 - 25 = -13$

NW

hegartymaths

Multiplication and division clip 23 29th September 2018

Worded problems

Key Words

lots of, divided by
goes into, shared

Quiz
 $1.82 \times 17 = 30.94$
 $2.66 \times 3 = 7.98$ ✓
 $3.16 \times 15 = 47.4$
 $574 \div 8 = 71.75$
 $820 \div 16 = 51.25$
 $1394 \div 24 = 58.08$

Notes

Need to know
times table facts

Need to know division
facts, long multiplication and
short division.

$4.87 \times 87 = 423.69$
 $5.080 \div 9 = 0.564$ ✓
 $609 \div 67 = 9.09$ ✓
 $6960 \div 67 = 103.89$ ✓
 $7569 \div 67 = 112.98$ ✓

Examples

EG1 52 cards in deck
how many in 9 decks

52 52 52 52

52 52 52 52 52

$4 \times 52 = 208$
 $\begin{array}{r} 4 \times 52 = 208 \\ \times 52 \\ \hline 8 \\ 20 \\ \hline 208 \end{array}$

EG2 123 divided by 3

$3 \overline{)123}$
 $\begin{array}{r} 041 \\ 3 \overline{)123} \\ \underline{12} \\ 3 \end{array}$

$8.4 \overline{)2244}$
 $\begin{array}{r} 061 \\ 8.4 \overline{)2244} \\ \underline{504} \\ 744 \\ \underline{720} \\ 24 \end{array}$

$9.3 \overline{)2251618}$
 $\begin{array}{r} 0856 \\ 9.3 \overline{)2251618} \\ \underline{18} \\ 45 \\ \underline{36} \\ 91 \\ \underline{81} \\ 106 \\ \underline{93} \\ 136 \\ \underline{117} \\ 191 \\ \underline{171} \\ 208 \\ \underline{187} \\ 218 \\ \underline{188} \\ 30 \end{array}$

$10.7 \overline{)553642}$
 $\begin{array}{r} 0760 \\ 10.7 \overline{)553642} \\ \underline{38} \\ 173 \\ \underline{149} \\ 246 \\ \underline{214} \\ 324 \\ \underline{321} \\ 32 \end{array}$

Square numbers clip 99 5th October 2018

Key words
power, square

Quiz

1.1 ✓ 15100 ✓

2.196 ✓ $16.15 \times 15 = 242.25$
 $13 \times 13 = 169$
 $C = 194$

3.25 ✓ 17169 ✓

4.169 ✓ 18.51 ✓

5.36 ✓ 19.133 ✓

6.144 ✓ 20

7.64 ✓

8.49 ✓

9.121 ✓

10.16 ✓

11.4 ✓

12.9 ✓


13.225 ✓


14.81 ✓


Notes

A square number is the result of a whole number multiplied by the same number, you can write $4 \times 4 = 16$ in a power or index form like this $4^2 = 16$. All square numbers are in one times tables up to 12 making them a bit easier to do

Examples

EG1 $2 \times 2 = 4$ 

$3 \times 3 = 9$ 

$4 \times 4 = 16$ 

EG2 the 1st square number = $1 = 1^2$

the 8th square number = $64 = 8^2$

the 14th square number = $196 = 14^2$

Saturday 6th October

Clip 183

Solving equations with x on both sides

Previously:

$$4x + 3 = 16$$

$$\begin{array}{r} 4x + 3 = 16 \\ -3 \quad -3 \\ \hline 4x = 13 \\ \div 4 \quad \div 4 \\ \hline x = \frac{13}{4} \end{array}$$

Example:

$$4x + 3 = 2x + 16$$

$$\begin{array}{r} 4x + 3 = 2x + 16 \\ -2x \quad -2x \\ \hline 2x + 3 = 16 \\ -3 \quad -3 \\ \hline 2x = 13 \\ \div 2 \quad \div 2 \\ \hline x = \frac{13}{2} \end{array}$$

Example:

$$6x + 10 = 3x + 16$$

$$\begin{array}{r} 6x + 10 = 3x + 16 \\ -3x \quad -3x \\ \hline 3x + 10 = 16 \\ -10 \quad -10 \\ \hline 3x = 6 \\ \div 3 \quad \div 3 \\ \hline x = 2 \end{array}$$

Example:

$$5x + 16 = 4x + 3$$

$$\begin{array}{r} 5x + 16 = 4x + 3 \\ -4x \quad -4x \\ \hline x + 16 = 3 \\ -16 \quad -16 \\ \hline x = -13 \end{array}$$

Example:

$$6x - 9 = 3x - 16$$

$$\begin{array}{r} 6x - 9 = 3x - 16 \\ -3x \quad -3x \\ \hline 3x - 9 = -16 \\ +9 \quad +9 \\ \hline 3x = -7 \\ \div 3 \quad \div 3 \\ \hline x = -\frac{7}{3} \end{array}$$

Keywords: Equation, solve, inverse operation, add, subtract, multiply, expand, variable, coefficient.

18/10/18

Pythagoras 501

key words:

- Triangle
- Square
- right angle
- Square root
- Pythagoras
- rearrange
- Hypotenuse

Find the length y . Give your answer as an exact surd.

$$9^2 - 6^2 = 81 - 36$$

$$x^2 = 45 \quad x = \sqrt{45}$$

$$\sqrt{45} = \sqrt{9 \times 5} = 3\sqrt{5}$$

$$y^2 = x^2 + 4^2 \quad (x^2 = 45)$$

$$= 45 + 16 = 61$$

$$y = \sqrt{61} \text{ m}$$

Find the length x , answer to 1dp.

$$5.2^2 - 3.7^2 = 13.36$$

$$= 13.37 \approx 5.6^2$$

$$= 13.37 + 31.36$$

$$= 17.99$$

$$= \sqrt{44.71}$$

$$= 6.7 \text{ cm}$$

Find the length x , answer to 1dp.

$$5^2 + 4^2 = 41$$

$$\sqrt{41}$$

$$4.1 + 6^2 = 7.7$$

$$\sqrt{77} = 8.7 \text{ m}$$

THE SAME HIGH STANDARDS ARE EXPECTED AT ALL LEVELS FROM ALL YEARS!

- ▶ If your child is struggling to complete the quiz they can refer back to the video and their notes.
- ▶ Pupils can send a message to their teacher via the Hegarty Website to ask how to do something if they're stuck.
- ▶ If there's a problem accessing the website, your child could go to KS3 Homework Club on Tuesdays after school in BG21.
- ▶ Pupils can also use the computers in the LEC at lunchtimes to complete homework.
- ▶ If they're still stuck on the day the homework is due, they can come to Maths Drop on a Monday lunchtime to get extra support.
- ▶ However, the biggest support your child can have with Hegarty homework is YOU!

SUPPORT WITH HEGARTY HOMEWORK



- ▶ Your children's homework will have been set on the Monday, so remind them early in the week to get it complete. Then they'll have time to speak to their teacher if they're struggling.
- ▶ Ask your children about the Maths they are working on; can they explain what they are doing?
- ▶ Go through your child's blue Hegarty exercise with them, congratulate them when they're showing high standards or encourage them to improve when they can.

HOW CAN YOU HELP?

- ▶ All our Year 7 pupils are also able to use Times Tables Rock Stars.
- ▶ Pupils compete to earn 'coins' and increase speed.
- ▶ Pupils can create their own avatar and customise it using coins they have earned.
- ▶ It's competitive and lots of fun, a great way to improve this important skill.



TIMES TABLES ROCK STARS



- ▶ You can help by talking to your child about Times Tables Rockstars.
- ▶ Remind them that they can use it or suggest they spend ten minutes on this each night before accessing any other online games.
- ▶ Ask them what their 'rock speed' is!
- ▶ Help them practise and test them.



TIMES TABLES ROCK STARS



The following Maths clubs run every week.
Why not suggest your child joins one?
There are interhouse competitions for all of these games.

- ▶ Wednesday: 24 Club
- ▶ Thursday: Times Tables Rock Stars
- ▶ Friday: Countdown

We also run mentoring for the UK Maths Challenge in BF04 every Thursday lunchtime for our able and talented Mathematicians in every year group.

CLUBS AND INTERHOUSE

- ▶ Encourage your children by asking about their Maths and making it clear you believe they can succeed.
- ▶ Help your children with homework by ensuring they have a quiet area to work.
- ▶ Help your children be organised for school by reminding them to pack both their Maths books for school and ensuring they have the correct equipment including a pen, pencil, ruler, rubber, protractor, a pair of compasses and a Casio scientific calculator.



HOW ELSE CAN YOU HELP?

- ▶ All adults use Maths throughout the course of each day, whether it's doing the shopping, following a recipe or measuring a room for decorating.
- ▶ Encourage your child to help you with every day tasks involving Mathematics.
- ▶ Play Mathematical games with your child – anything from Pontoon to Suduko.
- ▶ There are more examples of how you can help your child with Mathematics on the Maths stations around the room.
- ▶ You can also see Hegarty Maths and Times Tables Rockstars in action – even play a game yourself!

HOW ELSE CAN YOU HELP?