

# Maths Extenders



A stimulating resource for the  
upper primary years providing  
extension activities for  
early finishers.

**Ages 10 - 12**

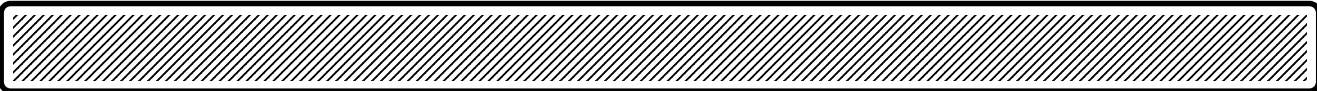


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## In the Hen House

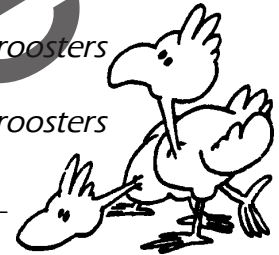
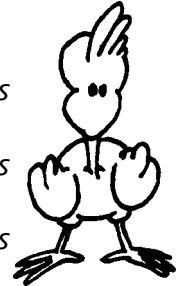
In a hatchery there are always 500 birds. If there are 110 more hens than roosters ...

- a. How many hens and how many roosters would there be?  
 \_\_\_\_\_ hens      \_\_\_\_\_ roosters = 500 altogether.



Now try these. Remember, there is always a total of 500 birds.

- b. 60 more hens than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters  
 c. 210 more hens than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters  
 d. 96 more hens than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters  
 e. 14 more hens than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters  
 f. 332 more hens than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters  
 g. 1 more hen than roosters = \_\_\_\_\_ hens      \_\_\_\_\_ roosters



Will the final problem work? Why/Why not? \_\_\_\_\_

### Calculations

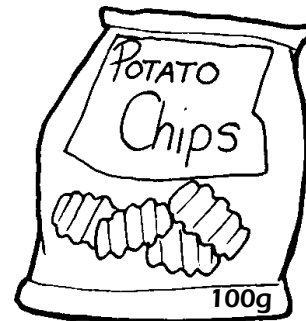
Use a calculator to help locate the missing signs.

- a.  $900 \square 300 \square 40 = 15$   
 b.  $67 \square 33 \square 29 = 2182$   
 c.  $72 \square 12 \square 12 = 72$   
 d.  $30 \square 15 \square 45 \square 8 = 480$

Which is the largest and by how much?  
 $6^4$  or  $4^6$  \_\_\_\_\_ by \_\_\_\_\_

### Think Quick!

Potato chips cost 80c per 100 grams.  
 How much would one tonne cost?

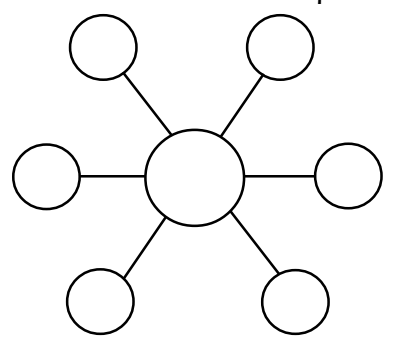


Answer: \$ \_\_\_\_\_

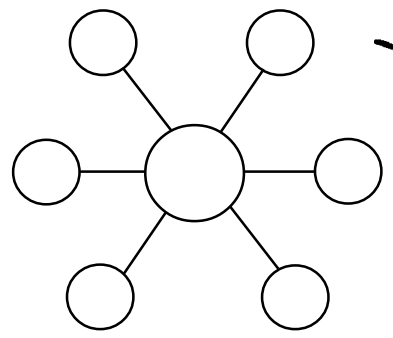
- ? Who was Pythagoras? \_\_\_\_\_  
 ? List four facts about him.  
 ? • \_\_\_\_\_ • \_\_\_\_\_  
 ? • \_\_\_\_\_ • \_\_\_\_\_  
 ? Can you explain his theorem? (Use the back of this page.)

### Patterned Response

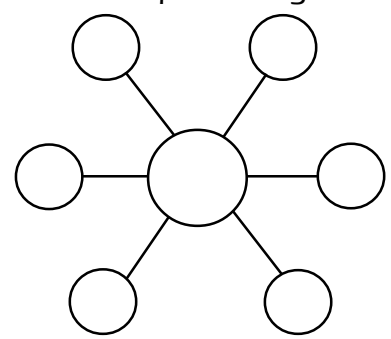
a. Place the numbers 1 to 7 so each line is equal.



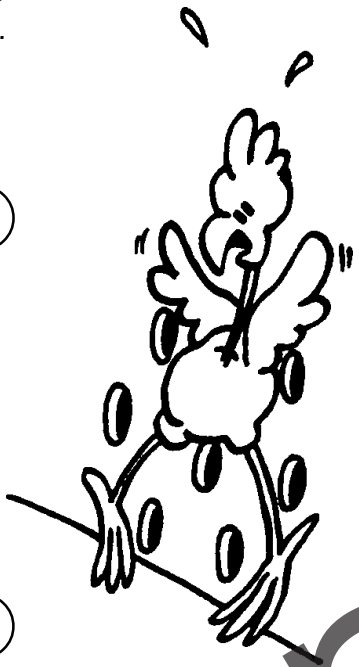
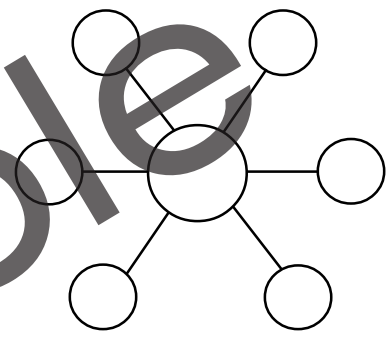
c. Now try 21 to 27.



b. Can you see the pattern? Now repeat using 11 to 17.

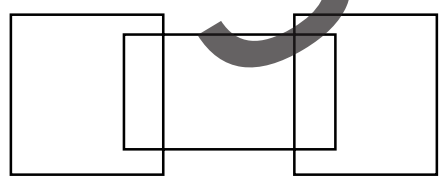


d. Now try 331 to 337.

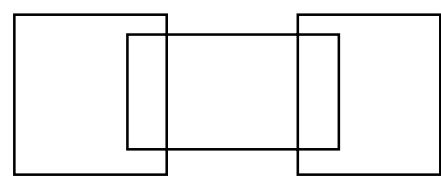


### Square Up

Place the numbers 1, 2, 3, 4, 5 so that each large shape (box) adds up to 6. Use each number only once.



Now try 21, 22, 23, 24, 25 to equal 46. Explain your results \_\_\_\_\_



### Patterns

Find the rule then complete the first grid. Create your own pattern in the second grid and challenge a friend to complete.

20	4		9
36	6		
		2	14
	5	2	
72		12	
	5	20	25


? Who was Archimedes?  
 ? On the back of this sheet list six facts about him and explain his principle.  
 ?  
 ?  
 ?  
 ?  
 ?  
 ?

# Sign Of The Times

A sign writer charges the following rates to paint letters.

<b>A</b> = \$1.00	<b>B</b> = \$2.00	<b>C</b> = \$3.00	<b>D</b> = \$4.00	<b>E</b> = \$5.00
<b>F</b> = \$6.00	<b>G</b> = \$7.00	<b>H</b> = \$8.00	<b>I</b> = \$9.00	<b>J</b> = \$10.00
<b>K</b> = \$11.00	<b>L</b> = \$12.00	<b>M</b> = \$13.00	<b>N</b> = \$14.00	<b>O</b> = \$15.00
<b>P</b> = \$16.00	<b>Q</b> = \$17.00	<b>R</b> = \$18.00	<b>S</b> = \$19.00	<b>T</b> = \$20.00
<b>U</b> = \$21.00	<b>V</b> = \$22.00	<b>W</b> = \$23.00	<b>X</b> = \$24.00	<b>Y</b> = \$25.00
<b>Z</b> = \$26.00				

What would the following signs have cost?

**For Rent**

\$ \_\_\_\_\_

**Save**

\$ \_\_\_\_\_

**Zoological Gardens**

\$ \_\_\_\_\_

**Stop**

\$ \_\_\_\_\_



Create signs costing the following values.

\_\_\_\_\_

\$12.00

\_\_\_\_\_

\$18.00

\_\_\_\_\_

\$38.00

\_\_\_\_\_

\$72.00

Find 20 words costing less than \$20.00

_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____

**Think Quick!**

Paint costs \$2.20 per 50mls. How much would it cost for a 2.5 L tin?

Answer:  
\$ \_\_\_\_\_

? Which is smallest and by how much?  
5<sup>3</sup> or 3<sup>5</sup>

? \_\_\_\_\_

? \_\_\_\_\_

? \_\_\_\_\_

? \_\_\_\_\_

## Squaring up

Find the pattern and complete these squares.

3		12
	6	30
15		18

9		63
		28
63		

	9	
		18
	54	24

		27
	8	
30		24

## These add up

Using the digits 0, 1, 2, 3, 4, 5 complete these sums.

e.g.

$$\begin{array}{r} 14 \\ 20 \\ + 35 \\ \hline 69 \end{array}$$

$$\begin{array}{r} 41 \\ 25 \\ + 03 \\ \hline 69 \end{array}$$

$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 87 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$	$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 87 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$	$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 87 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$
$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 96 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$	$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 96 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$	$\begin{array}{r} \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \\ + \underline{\hspace{1cm}} \\ \hline 96 \\ \hline \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \end{array}$

## Discount

A video shop offers 25% off all games. Can you work out their new prices?

'Street Fighter' was **\$122.00**  
Now: \$ \_\_\_\_\_

'NBA Jam' was **\$139.00**  
Now: \$ \_\_\_\_\_

'Mario Bros' was **\$98.00**  
Now: \$ \_\_\_\_\_

'Sonic' was **\$112.00**  
Now: \$ \_\_\_\_\_

## Research Time

What is a 24 hour clock? \_\_\_\_\_

Where is it used? \_\_\_\_\_

Complete this chart using the 24 hour clock.

	OUR TIME	24 HOUR TIME
a.	3.27 pm	
b.		2400
c.	11.49 pm	
d.	8.11 am	
e.		1321

How many seconds in a week?

\_\_\_\_\_

