

# HOME LEARNING

## Year 8 – Maths

Focus for this week: Percentages of amounts

Essential learning:	<ul style="list-style-type: none"><li>Find 25%, 50% and 75% of an amount (quarters)</li></ul>
Practising:	<ul style="list-style-type: none"><li>Find 20%, 40%, 60% and 80% of amounts (fifths)</li></ul>
Learning about:	<ul style="list-style-type: none"><li>Find 10% and 1% of amounts</li><li>Calculating percentages of amounts using 10% and 1%</li></ul>
Extension:	<ul style="list-style-type: none"><li>Increasing amounts by a percentage</li></ul>


### Contents:

- Worksheet 1** Find 25%, 50% and 75% of an amount (quarters)
- Worksheet 2** Find 20%, 40%, 60% and 80% of amounts (fifths)
- Worksheet 3** 10% and 1%
- Worksheet 4** Percentages of amounts
- Worksheet 5** Increasing amounts by a percentage

### Additional activities:


- Look in a newspaper or magazine and cut and stick or record all the references to percentages that you can find.

### Percentages of a Number (25%, 50%, 75%)

	<b>Useful Facts:</b> $50\% = \frac{1}{2}$ $25\% = \frac{1}{4}$ $75\% = \frac{3}{4}$
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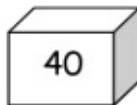
It is useful to know percentages as fractions because it can help you find the percentage of a number.

#### Finding Percentages of a Number:

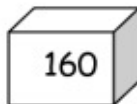
	100% = 24	$25\% = \frac{1}{4}$ of 24, so 24 divided by 4 = 6
	75% = 18	
	50% = 12	$50\% = \frac{1}{2}$ of 24, so 24 divided by 2 = 12
	25% = 6	$75\% = \frac{3}{4}$ of 24, so 24 divided by 4 = 6 6 times 3 = 18

Find 25%, 50% and 75% of the numbers in the cubes.

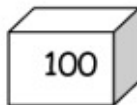
1.



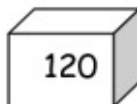
2.



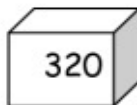
3.



4.



5.



**Worksheet 2** Find 20%, 40%, 60% and 80% of amounts (fifth  
To find 10% divide the number by 10. For 20% multiply the 10% by 2.  
Always find 10% first and then times by the number of 10% you need.  
Example 30% of 120. 120 divided by 10 =12 12x3=36

## Percentage of Number Worksheet

Calculate the percentages.

<b>1 a.</b> 20% of 50	<b>1 b.</b> 50% of 80
<b>2 a.</b> 50% of 100	<b>2 b.</b> 70% of 70
<b>3 a.</b> 80% of 30	<b>3 b.</b> 60% of 30
<b>4 a.</b> 30% of 30	<b>4 b.</b> 10% of 10
<b>5 a.</b> 20% of 80	<b>5 b.</b> 80% of 10
<b>6 a.</b> 20% of 0	<b>6 b.</b> 60% of 90
<b>7 a.</b> 10% of 70	<b>7 b.</b> 70% of 0
<b>8 a.</b> 20% of 60	<b>8 b.</b> 50% of 50

To find 10% divide the number by 10. To find 1% divide the number by 100.



## FIND SIMPLE PERCENTAGES SHEET 1

*Find these percentages of numbers and amounts.*

### A) 50% and 100%

- |                 |                  |                 |
|-----------------|------------------|-----------------|
| 1) 50% of 14 =  | 2) 50% of 60 =   | 3) 100% of 12 = |
| 4) 50% of 24 =  | 5) 100% of 25 =  | 6) 50% of 18 =  |
| 7) 100% of 17 = | 8) 50% of 40 =   | 9) 50% of 80 =  |
| 10) 50% of 50 = | 11) 100% of 64 = | 12) 50% of 38 = |

### B) 1% and 10%

- |                  |                  |                  |
|------------------|------------------|------------------|
| 1) 10% of 70 =   | 2) 10% of 30 =   | 3) 1% of 400 =   |
| 4) 10% of 30 =   | 5) 1% of 500 =   | 6) 10% of 120 =  |
| 7) 10% of 400 =  | 8) 1% of 1200 =  | 9) 1% of 3800 =  |
| 10) 10% of 500 = | 11) 10% of 180 = | 12) 1% of 1800 = |

### C) 1%, 10%, 50% and 100%

- |                  |                  |                   |
|------------------|------------------|-------------------|
| 1) 50% of 40 =   | 2) 1% of 700 =   | 3) 10% of 140 =   |
| 4) 100% of 80 =  | 5) 10% of 320 =  | 6) 50% of 160 =   |
| 7) 1% of 900 =   | 8) 50% of 72 =   | 9) 10% of 900 =   |
| 10) 10% of 320 = | 11) 1% of 5300 = | 12) 100% of 120 = |
| 13) 50% of 240 = | 14) 1% of 2700 = | 15) 10% of 800 =  |

## Worksheet 4 Percentages of amounts

To find multiples of 1% or 10%. Find 1% first and then multiply by the number of 1% you need and the same with 10%.

Example 4% Of 244 244 divided by 100=2.44 2.44 x 4=9.76

30% of 18 18 divided by 10=1.8 1.8 x 3=5.4

Name \_\_\_\_\_

Date \_\_\_\_\_



## FINDING PERCENTAGES SHEET 2

Find these percentages of numbers.

### A) Multiples of 1%

- |                 |                  |                 |
|-----------------|------------------|-----------------|
| 1) 3% of 400 =  | 2) 2% of 60 =    | 3) 5% of 200 =  |
| 4) 1% of 270 =  | 5) 7% of 500 =   | 6) 4% of 1200 = |
| 7) 2% of 330 =  | 8) 8% of 300 =   | 9) 6% of 2000 = |
| 10) 9% of 700 = | 11) 3% of 6000 = | 12) 1% of 70 =  |

### B) Multiples of 10%

- |                  |                  |                 |
|------------------|------------------|-----------------|
| 1) 20% of 80 =   | 2) 50% of 130 =  | 3) 70% of 50 =  |
| 4) 30% of 12 =   | 5) 60% of 80 =   | 6) 40% of 120 = |
| 7) 80% of 400 =  | 8) 10% of 7 =    | 9) 90% of 80 =  |
| 10) 50% of 320 = | 11) 30% of 600 = | 12) 70% of 11 = |

### C) Mixed

- |                  |                  |                 |
|------------------|------------------|-----------------|
| 1) 40% of 200 =  | 2) 3% of 50 =    | 3) 20% of 140 = |
| 4) 60% of 3 =    | 5) 30% of 80 =   | 6) 7% of 800 =  |
| 7) 4% of 150 =   | 8) 90% of 20 =   | 9) 50% of 36 =  |
| 10) 30% of 800 = | 11) 6% of 20 =   | 12) 3% of 220 = |
| 13) 70% of 60 =  | 14) 40% of 210 = | 15) 5% of 500 = |

## Worksheet 5 Increasing amounts by a percentage

To find 10 and 20% see previous work sheet.

For 5% find 10% and then halve your answer

Example 5% Of 24. 24 divided by 10 = 2.4 2.4 divided by 2 = 1.2

### Percentage increase

Name \_\_\_\_\_

Question	Number	10%	20%	5%
1.	240			
2.	520			
3.	2600			
4.	780			
5.	60			
6.	90			
7.	25			

- Find 240 increased by 10%  
10% of 240 = \_\_\_\_\_  
240 + \_\_\_\_\_ = \_\_\_\_\_
- Find 780 increased by 10%  
10% of 780 = \_\_\_\_\_  
780 + \_\_\_\_\_ = \_\_\_\_\_
- Find 90 increased by 10%  
10% of 90 = \_\_\_\_\_  
90 + \_\_\_\_\_ = \_\_\_\_\_
- Find 520 increased by 10%  
10% of 520 = \_\_\_\_\_  
520 + \_\_\_\_\_ = \_\_\_\_\_
- Find 240 increased by 20%  
20% of 240 = \_\_\_\_\_  
240 + \_\_\_\_\_ = \_\_\_\_\_
- Find 60 increased by 20%  
20% of 60 = \_\_\_\_\_  
60 + \_\_\_\_\_ = \_\_\_\_\_
- Find 2600 increased by 5%  
5% of 2600 = \_\_\_\_\_  
2600 + \_\_\_\_\_ = \_\_\_\_\_
- Find 25 increased by 5%  
5% of 25 = \_\_\_\_\_  
25 + \_\_\_\_\_ = \_\_\_\_\_