

Homework/Extension

Step 4: Percentage of an Amount 1

National Curriculum Objectives:

Mathematics Year 6: (6R2) [Solve problems involving the calculation of percentages \[for example, of measures, and such as 15% of 360\] and the use of percentages for comparison](#)

Mathematics Year 6: (6F11) [Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Use known fractional equivalences to match calculations to the correct visual image and answer. Includes finding 50% and 10% of any number.

Expected Use known fractional equivalences to match calculations to the correct visual image and answer. Includes finding 1%, 10%, 25% and 50% of any number.

Greater Depth Use known fractional equivalences to complete the statements. Includes finding 1%, 10%, 25% and 50% of any number. Conversions and decimal numbers included.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify whether statements about finding percentages of an amount are correct. Includes finding 50% and 10% of any number.

Expected Identify whether statements about finding percentages of an amount are correct. Includes finding 1%, 10%, 25% and 50% of any number.

Greater Depth Identify whether statements about finding percentages of an amount are correct. Includes finding 1%, 10%, 25% and 50% of any number. Conversions and decimal numbers included.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Prove which statement is correct when finding a percentage of an amount in context. Includes finding 50% and 10% of any number.

Expected Prove which statement is correct when finding a percentage of an amount in context. Includes finding 1%, 10%, 25% and 50% of any number.

Greater Depth Prove which statement is correct when finding a percentage of an amount in context. Includes decimals and finding 1%, 10%, 25% and 50% of any number. Decimal numbers included.

More [Year 6 Percentages](#) resources.

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Percentage of an Amount 1

1. Draw a line to match each calculation with the correct visual representation and answer.

<p>A. 10% of 30</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="10" style="text-align: center;">600</td></tr> <tr><td colspan="5" style="text-align: center;">50%</td><td colspan="5" style="text-align: center;">50%</td></tr> </table>	600										50%					50%					30
600																						
50%					50%																	
<p>B. 50% of 600</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="10" style="text-align: center;">30</td></tr> <tr><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td></tr> </table>	30										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	3
30																						
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%													
<p>C. 10% of 300</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="10" style="text-align: center;">300</td></tr> <tr><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td></tr> </table>	300										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	300
300																						
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%													



VF
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2. Decide whether the statements below are correct. Correct if necessary.

- A. 50% of 40 is equivalent to $\frac{1}{2}$ of 40. To calculate the answer, I must divide 40 by 5. The answer is 8.
- B. 10% of 500 is equivalent to $\frac{1}{10}$ of 500. To calculate the answer, I must divide 500 by 10. The answer is 5.
- C. 50% of 30 is equivalent to $\frac{1}{2}$ of 30. To calculate the answer, I must divide 30 by 2. The answer is 15.



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3. A pair of roller skates normally cost £90. There is currently 10% off everything in the shop.

Charlie says,



I think the skates will cost £81 in the sale.

Sasha says,



I think the skates will cost £9 in the sale.

Who is correct? Prove it.



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Percentage of an Amount 1

4. Draw a line to match each calculation with the correct visual representation and answer.

<p>A. 50% of 400cm</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="4" style="text-align: center;">4m</td></tr> <tr><td style="text-align: center;">25%</td><td style="text-align: center;">25%</td><td style="text-align: center;">25%</td><td style="text-align: center;">25%</td></tr> </table>	4m				25%	25%	25%	25%	<p>40cm</p>												
4m																						
25%	25%	25%	25%																			
<p>B. 25% of 4m</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="10" style="text-align: center;">400cm</td></tr> <tr><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td><td style="text-align: center;">10%</td></tr> </table>	400cm										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	<p>1m</p>
400cm																						
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%													
<p>C. 10% of 400cm</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">400cm</td></tr> <tr><td style="text-align: center;">50%</td><td style="text-align: center;">50%</td></tr> </table>	400cm		50%	50%	<p>200cm</p>																
400cm																						
50%	50%																					



VF
HW/Ext

5. Decide whether the statements below are correct. Correct if necessary.

A. 1% of 600 is equivalent to $\frac{1}{100}$ of 600. To calculate the answer, I must divide 600 by 100. The answer is 60.

B. 50% of 70 is equivalent to $\frac{1}{2}$ of 70. To calculate the answer, I must divide 70 by 2. The answer is 35.

C. 25% of 164 is equivalent to $\frac{1}{4}$ of 164. To calculate the answer, I must divide 164 by 2. The answer is 82.



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6. The front suspension, turbo-boost bike normally costs £460. There is currently 25% off everything in the shop.

Aito says,



I think the bike will cost £115 in the sale.

Polly says,



I think the bike will cost £345 in the sale.

Who is correct? Prove it.



RPS
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Percentage of an Amount 1

7. Complete each of the statements below.

A. 25% of 6.48m is equivalent to $648\text{cm} \div \underline{\hspace{1cm}}$ = $\underline{\hspace{1cm}}\text{cm}$

B. 50% of 0.87L is equivalent to $\underline{\hspace{1cm}}\text{ml} \div 2$ = $\underline{\hspace{1cm}}\text{ml}$

C. 1% of 59cm is equivalent to $590\text{mm} \div \underline{\hspace{1cm}}$ = $\underline{\hspace{1cm}}\text{mm}$



VF
HW/Ext

8. Decide whether the statements below are correct. Correct if necessary.

A. 25% of 2.8m is equivalent to $\frac{1}{4}$ of 280cm. To calculate the answer, I must divide 280cm by 4. The answer is 70cm.

B. 1% of 7km is equivalent to $\frac{1}{100}$ of 7,000m. To calculate the answer, I must divide 7,000m by 10. The answer is 700m

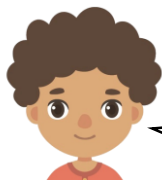
C. 50% of 730p is equivalent to $\frac{1}{2}$ of £73.00. To calculate the answer, I must divide £73.00 by 2. The answer is £36.50.



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9. The Epic Wipeout Skateboard normally costs £581. There is currently 1% off everything in the shop.

Albie says,



I think the skateboard will cost £522.90 in the sale.

Lacey says,



I think the skateboard will cost £575.19 in the sale.

Who is correct? Prove it.



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Percentage of an Amount 1

Developing

1. **A = 3, B = 300, C = 30**
2. **A is incorrect as you need to divide by 2 when finding 50% of an amount. $40 \div 2 = 20$. B is incorrect as $500 \div 10 = 50$. C is correct.**
3. **Charlie is correct. 10% of £90 = £9. This means that there will be £9 off in the sale. $£90 - £9 = £81$**

Expected

4. **A = 200cm, B = 1m, C = 40cm**
5. **A is incorrect as $600 \div 100 = 6$. B is correct. C is incorrect as you need to divide by 4 when finding 25% of an amount. $164 \div 4 = 41$.**
6. **Polly is correct. 25% of £460 = £115. This means that there will be £115 off in the sale. $£460 - £115 = £345$**

Greater Depth

7. **A = $648\text{cm} \div 4 = 162\text{cm}$
B = $870\text{ml} \div 2 = 435\text{ml}$
C = $590\text{mm} \div 100 = 5.9\text{mm}$**
8. **A is correct. B is incorrect as you need to divide by 100 when finding 1% of an amount. $7,000\text{m} \div 100 = 70\text{m}$. C is incorrect as 730p is equivalent to £7.30. $£7.30 \div 2 = £3.65$**
9. **Lacey is correct. 1% of £581 = £5.81. This means that there will be £5.81 off in the sale. $£581 - £5.81 = £575.19$**