

# HOT SHOTS

E CA AC EA AA **AM** AP

*I am learning to work out percentages of amounts.*

**PRIOR KNOWLEDGE REQUIRED:** You should remember from "Decimats" that if you multiply the numerator and denominator by the same number you will get an equivalent fraction e.g.  $\frac{3}{6} = \frac{9}{18}$ . These are equivalent fractions because the numerator which is 3 and the denominator which is 6 have been multiplied by the same number, 3 to make the equivalent fraction.

% is the sign for percentage. Percentage means out of 100.

1) Complete the table turning these fractions into percentages.

Question	$\frac{\text{.....}}{100}$	Percentage %	Question	$\frac{\text{.....}}{100}$	Percentage %
a) $\frac{2}{10}$	$\frac{20}{100}$	20%	g) $\frac{5}{25}$		
b) $\frac{44}{50}$			h) $\frac{30}{50}$		
c) $\frac{7}{10}$			i) $\frac{6}{10}$		
d) $\frac{5}{20}$			j) $\frac{4}{5}$		
e) $\frac{25}{50}$			k) $\frac{9}{20}$		
f) $\frac{8}{8}$			l) $\frac{41}{50}$		

**NEW STRATEGY WITH MATERIALS:**

You can change any fraction into a percentage but first you must make that fraction out of 100. The number strips below should help you do this.

0      10      20      30      40      50      60      70      80      90      100

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0                      5                                      12.5                                      20                                      25

2) Jim got 20 questions correct in a test out of 25. What percentage did he get correct?

3) The dairy sold 25 sandwiches at lunch. 12.5 of those sandwiches were on white bread (you can buy half a sandwich). What percentage of sandwiches sold were on white bread?

4) Alice has biked to school for 25 days in a row. It has rained for 5 of them. What percentage of days has it rained for?

5) There are 25 students in Room 3. 25 of them have blue lunch boxes. What percentage of them have blue lunch boxes?

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**NEW STRATEGY WITH IMAGING:**

0                      25                      50                      75                      100

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0                      10                      20                      30                      40

- 1) Kate got 30 out of 40 shots in at netball. What percentage did she get in?
- 2) Jim got 40 runs in cricket. 20 of those were in boundaries (fours or sixes). What percentage of his runs were boundaries?
- 3) Adam got 5 answers wrong in a test out of 40. What percentage did he get wrong?
- 4) There are 40 people at the swimming pool. 25 of them are boys. What percentage are boys?
- 5) There are 40 year sevens at Happy Hill Primary. 15 of them have other brothers or sisters at the school. What percentage have other brothers or sisters at the school?

**WORD PROBLEMS USING NUMBER PROPERTIES:**

You may find it helpful to make percentage strips, like in the example above, to answer these.

6) Bill loves pizza. His mum offers him  $\frac{13}{24}$  of a pizza or 75%. What should he choose? You must explain your working.

7) Susan is having a party and wants to invite all her class. Her parents give her a choice. She can invite  $\frac{27}{33}$  or 75% of her class. Which option would allow her to take the most amount of people? You must explain your working.

8) Kane is allowed  $\frac{4}{6}$  of a chocolate bar or 80%. If he wants as much chocolate as he can get what option should he choose. You must explain your working.