

WORKSHEET

Percentage shortcuts

When solving percentage problems, often it is more convenient to type percentages as decimals into the calculator.

1 Write as decimals.

Example Increase \$64 by 15% 100% + 15% = 115% 115% × \$64 = 1.15 × 64 = \$73.60 (Check this gives the correct answer!) 3 Increase: a \$79 by 15% b \$30 by 25% c \$128 by 40% d \$340 l e \$22.30 by 11% f \$395 by 5% g \$75.40 by 10% h \$220 l i \$381 by $7\frac{1}{4}$ % j \$42.20 by 12.8% k \$528.60 by 8.3% I \$45.50 Example Decrease (discount) \$45 by 10% 100% - 10% = 90% 90% × \$45 = 0.9 × 45 = \$40.50 4 Decrease: a \$30 by 10% b \$75 by 8% c \$800 by 5% d \$179 l e \$88.50 by 12% f \$460 by 18% g \$7440 by 30% h \$1050							
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	oy 15%						
	by 45%						
i \$79.90 by $9\frac{3}{4}\%$ j \$235 by 5.2% k \$67 by 66% I \$380.	10 by 33%						



- 5 Georgia earns 5% commission on all her sales of kitchenware. How much will she earn from selling \$8750 worth of kitchenware?
- 6 The Jean Pool is having a '12% off' sale. Calculate the sale price of each item.
 - **a** jeans \$74.60 **b** caps \$12.80 **c** shirts \$37.50
- 7 Patrick earns a salary of \$78 290 but received a pay rise of 8.5%. Calculate his new salary.
- 8 A sum of \$5000 is invested in a savings account which earns 7% interest each year.
 - a Complete: Increasing \$5000 by 7% is the same as multiplying \$5000 by _____
 - **b** Calculate the size of the \$5000 investment after 1 year.
 - c Increase the answer in part by 7% to find the size of the investment after another year.
 - d How much is the investment after another year (over 3 years)?
 - e Challenge: What is the meaning of this formula: $A = 5000 \times (1.07)^n$?



Answers

1 a 0.12	b 0.73	c 0.05	d 0.4	e 0.186	f 0.08
g 0.031	h 1.22	i 0.0695	j 0.125	k 1.5	I 0.0825
2 a \$14.40	b \$397.71	c \$2.52	d \$15.46	e \$142.40	f \$11 926
g 74c	h \$4.53	i \$53.28	j \$130	k \$63.72	\$3.83
3 a \$90.85	b \$37.50	c \$179.20	d \$360.40	e \$24.75	f \$414.75
g \$82.94	h \$255.20	i \$408.62	j \$47.60	k \$572.47	I \$91
4 a \$27	b \$69	c \$760	d \$152.15	e \$77.88	f \$377.20
g \$5208	h \$577.50	i \$72.11	j \$222.78	k \$22.78	I \$254.67
5 \$437.50					
6 a \$65.65	b \$11.26	c \$33			
7 \$84 944.65					
8 a 1.07	b \$5350	c \$5724.50	d \$6125.22		

e The size of the investment after *n* years