Revision & Pract Worksheet 3

A Number skills: Converting between decimals and percentages
Skill 1.3

Make these into percentages:

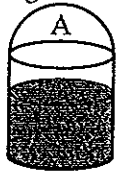|							
1	0.23	2	0.058	3	0.0632	4	2.046
5	9.143	6	6.812	7	7.09	8	0.05
9	2.042	10	0.074	11	5.281	12	4.09

Makes these into decimals:

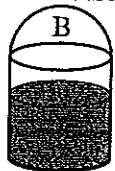|							
13	63.04%	14	19.5%	15	117.09%	16	3.09%
17	0.05%	18	3.192%	19	15.04%	20	4.931%
21	1.02%	22	6.093%	23	38.09%	24	128.49%

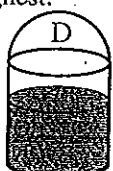## B Number skills: Comparing parts of quantities
Skill 1.4

The following 4 L paint cans contain different amounts of paint. Convert the quantities of paint to percentages and list the cans from least filled to highest:

A	B	C	D	E	F
2.8 L full	69.3% full	$\frac{3}{4}$ full	$\frac{3}{8}$ empty	27.3% used	1 L used

C Number applications: Finding fractions of quantities
Skill 2.5

Find the fractions of these quantities:

1. $\frac{2}{9}$ of $15.30
2. $\frac{3}{4}$ of 2 kg
3. $\frac{5}{8}$ of 16 hrs
4. $\frac{3}{7}$ of 441 g
5. $\frac{2}{5}$ of $32.15
6. $\frac{6}{11}$ of $137.61
7. $\frac{9}{13}$ of 7.8 t
8. $\frac{7}{16}$ of 80.32 kg
9. $\frac{5}{11}$ of $12.21
10. $\frac{7}{13}$ of 91 s
11. $\frac{5}{8}$ of 728 hrs
12. $\frac{1}{9}$ of 56.88 t

D Number applications: Expressing fractions of quantities as percentages
Skill 2.6

1. Express these test results (out of 112) as a whole number percentage
   (45, 38, 79, 100, 102, 99, 83, 14, 52, 63, 68, 42, 93, 49, 86, 94, 73, 61, 58, 89, 72, 90, 80, 70, 50).

2. A motor cycle's petrol tank capacity is 9.54 L. If at the moment there is 6.2 L of petrol in the tank, what percentage of the tank is:
   (a) empty
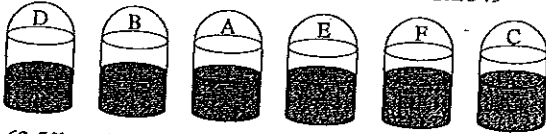   (b) full?

E Algebra: Expanding brackets
Skill 3.2

Expand these brackets:

1. $-2a(b + 3)$
2. $5a(2b - 4c)$
3. $-11a(5b + 6)$
4. $9(2a + 3b)$
5. $\frac{1}{2}(2a - 4b)$
6. $-\frac{3}{8}(4a + 16c)$
7. $\frac{ac}{4}(2 + 8b + 3)$
8. $4.20(8a - 4b)$
9. $(x - 3y)(x + 3y)$
10. $(4a - b)(a + b)$
11. $(6a - 7b)(2a + b)$
12. $(11a - 5b)(a + 4b)$
13. $(a + 1)(4c - 2)$
14. $(9a + 2b)(a - 3b)$
15. $(6a - 7)(4a + 3)$
16. $(3b - 4)(6a + 1)$

Worksheet 3

A
1	23%	2	5.8%	3	6.32%
4	204.6%	5	914.3%	6	681.2%
7	709%	8	5%	9	204.2%
10	7.4%	11	528.1%	12	409%
13	0.6304	14	0.195	15	1.117 09
16	0.0309	17	0.0005	18	0.031 92
19	0.1504	20	0.049 31	21	0.0102
22	0.060 93	23	0.3809	24	1.2849

B

D 62.5%   B 69.3%   A 70%   E 72.7%   F 75%   C 75%

C
1	$3.40	2	1.5 kg	3	10 hrs
4	189 g	5	$12.86	6	$75.06
7	5.4 t	8	35.14 kg	9	$5.55
10	49 s	11	455 hrs	12	6.32 t

D
1 (40, 34, 71, 89, 91, 88, 74, 13, 46, 56, 61, 38, 83, 44, 77, 84, 65, 54, 52, 79, 64, 80, 71, 63, 45)

2 (a) 35%   (b) 65%

E
1 $-2a - 6a$

2 $10ab - 20ac$

3 $-55ab - 66a$

4 $18a + 27b$

5 $a - 2b$

6 $-1.5a - 6c$

7 $\dfrac{ac}{2} + 2abc + \dfrac{3ac}{4}$

8 $32.16a - 16.08b$

9 $x^2 - 9y^2$

10 $4a^2 + 3ab - b^2$

11 $12a^2 - 8ab - 7b^2$

12 $11a^2 + 39ab - 20b^2$

13 $4ac - 2a + 4c - 2$

14 $9a^2 - 25ab - 6b^2$

15 $24a^2 - 10a - 21$

16 $18ab + 3b - 24a - 4$