Non-calculator ANSWERS

1. £ 3.75 x 8 = £ 30.00

2. £ 3.99 + (2 x £ 4.99) = £ 13.97

3. £ 50.00 - £ 34.56 = £ 15.44

4. £ 1.68 ÷ 12 = £ 0.14 or 14p

5. TIP: no calculations required: just use the information you have been given.

   (a) 13.5

   (b) 62.1

   (c) 460

6. $\frac{48}{100} = \frac{12}{25}$

7. $\frac{7}{25} = \frac{28}{100} = 0.28$

8. $\frac{3}{5} = \frac{6}{10} = \frac{60}{100} = 60\%$

9. 55% of 400 = 220

   50% is 200
   10% is 40
   5% is 20
   so: 55% is 220
   (OR 0.55 x 400 = 55 x 4 = 220)

10. Find 15% of £30, then add it on to the original.

    £ 30 + £ 4.50 = £ 34.50

11. Find 22% of £ 45.00, then subtract it from the original.

    £ 45.00 – £ 9.90 = £ 35.10

12. $\frac{3}{4}$ x 24 = 3 x (24 ÷ 8) = 3 x 3 = 9

13. $\frac{3}{4}$ x $\frac{8}{9}$ = $\frac{2}{3}$

$\frac{1}{3} \div \frac{5}{6} = \frac{1}{3} \times \frac{6}{5} = \frac{6}{15} = \frac{2}{5}$

$\frac{1}{3} + \frac{3}{4} = \frac{13}{12} = 1\frac{1}{12}$

$2\frac{3}{4} - \frac{1}{3} = \frac{11}{4} - \frac{1}{3} = \frac{29}{12} = 2\frac{5}{12}$

14. (a) 30 days

    (b) 20 tins

15. 3 – 5 + 8 = -2 + 8 = 6

16. 3 + 4 x 5 = 3 + 20 = 23

17. 64 – (3 + 8) x 2^2 = 64 – 44 = 20

18. (a) 180 = 2^2 x 3^2 x 5

    (b) 5

    (c) 45 (3^2 x 5)

19. (a) 17, 20, 23

    (b) 47

20. (a) 3a + c = 6 + 5 = 11

    (b) 3c + b^2 = 15 + 9 = 24

    (c) a – b = 2 - -3 = 5

21. (a) a = 3

    (b) x = 0.5 or ½

    (c) x = 3

    (d) x = 5

    (e) x = 4.5

22. (a) $\frac{4}{20} = \frac{1}{5}$

    (b) $\frac{3}{20}$

Calculator ANSWERS

1. (a) $\dfrac{30 \times 6}{3} = \dfrac{180}{3} = 60$

   (b) 62.420338

   (c) 62.42

   (d) 62.4

2. (a) 20

   (b) Morag 16, Hamish 40

   (c) 21 in total

3. $\dfrac{35}{200} \times 100 = 17.5\%$

4. 20 km/hr
   (how far would she run in 1 hr)

5. (a) 72 x 2.5 = 180 km

   (b) 684 ÷ 72 = 9.5 hrs (9 hrs 30 mins)

   (c) 72 km/hr = 20 m/s

6. (a) 8a + 2b

   (b) 30 $a^3 b$

7. (a) 3x + 12

   (b) 3 + 14 x – 35 = 14x – 32

   (c) 4 – 2x + 12 = 16 – 2x

8. (a) 4 (x + 2)

   (b) a (b + 3)

   (c) 2c (c + 2d)

9. (a) x – 3

   (b) 4x

   (c) x + x – 3 + 4x = 17
      6x – 3 = 17
      x = 3.3333…. or $3\frac{1}{3}$

10. (a) 21 x 12 = 252 inches

    252 x 2.54 = 640.08 cm = 6.4008 m

    (b) 13 ÷ 2.54 = 5.12 inches
    (rounded to 2 dp)

11. 5.4

12. 60