

YEAR 9 PROCEDURAL TEST A

SOLUTIONS

NAME:

Score: / 36

1. 25% of 400g = **100** g (1)

2. **10** % of 600g = 60g (1)

3. Natalie is looking into hiring a car for her summer holiday in Greece.



The cost of hire is £20 per day. How much does she have to pay to hire a car for 11 days?

20 x 11 = £220 (1)

4. **49** ÷ 7 + 11 = 18 (1)

5. Beans are sold in 'snap pots' packs of four.



John needs to buy 17 'snap pots'. How many packs should he buy?

5 (1)

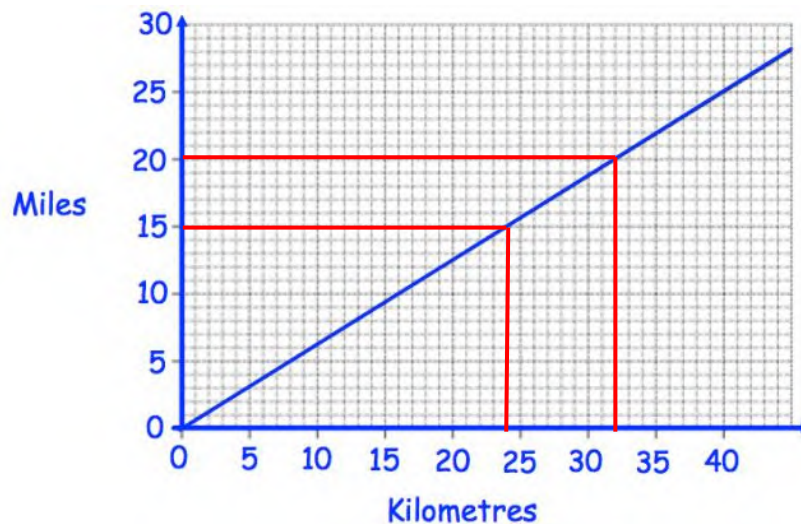
6. $1000 - 27.7 + 35.2 =$ **1007.5** (1)

7. Insert one pair of brackets to make this calculation correct.

$$80 \times (4 + 6) \div 2 = 400 \quad (1)$$

8. 20% of 80 = 40% of **40** (1)

9. **Conversion graph to change kilometres to miles**



24 km = **15** miles 80 miles = **128** km* (2)

***Read off value at 20miles and multiply by 4, so 32 x 4 = 128**

10. Gethin needs to buy a new school uniform for his son.



He decides to buy a blazer costing £34.99, a tie costing £3.99, trousers costing £13.99 and a shirt costing £11.95.

Estimate, to the nearest £, his change if he pays with two £50 notes.

$$\mathbf{\pounds 35 + \pounds 4 + \pounds 14 + \pounds 12 = \pounds 65}$$

$$\mathbf{\pounds 100 - \pounds 65 = \pounds 35} \tag{1}$$

11. $1:7 = 3: \mathbf{21}$ (1)

12. $\frac{1}{3} \times \frac{1}{3} = \frac{\mathbf{1}}{\mathbf{9}}$ (1)

13. $\left(\frac{\mathbf{2}}{\mathbf{5}}\right)^2 = \frac{\mathbf{2}}{\mathbf{5}} \times \frac{\mathbf{2}}{\mathbf{5}} = \frac{\mathbf{4}}{\mathbf{9}}$ (1)

14. Work out the **area** of a circle whose radius is 10 cm. Use $\pi = 3.14$.

$$\mathbf{A = \pi r^2 = 3.14 \times 10 \times 10 = 314 \text{ cm}^2}$$

..... cm² (2)

15. If the distance between two places is 35 cm on a map, and the scale is, **5cm = 1 km**, how far apart are they actually? **$35/5 = 7$ km** (1)

A group say that they walk at average speed of 6 km per hour. From the map they calculate the distance they will need to walk as 15 km. At this speed how long will it take? **6km = 1hour**

12km = 2 hours

15km = 2 ½ hours (1)

16. $0.4 \times 0.2 =$ **0.08** (1)

$8 \div 0.04 =$ **200** (1)

17. Decrease £45 by 10%

$10\% = 45/10 = £4.50$

$£45 - £4.50 = £40.50$ (1)

18. $3^2 \times 3^4 =$ **3^6** (1)

$2^{11} \div 2^4 =$ **2^7** (1)

19. Circle the value that is equivalent to 6%

6.0 0.6 6.00 **0.06** 0.006 (1)

20. Write the fraction that is exactly halfway between $\frac{1}{3}$ and $\frac{1}{2}$.

$\frac{1}{3} = \frac{4}{12}$ $\frac{1}{2} = \frac{6}{12}$ therefore halfway $= \frac{5}{12}$ (2)

21. A year 9 class were asked how many certificates they had received since joining their school. The 15 students who had received the most are shown in this table.

Number of students	Number of certificates
1	21
2	19
2	14
4	15
6	12

What fraction of these students had received more than 15 certificates?

$$\frac{3}{15} \text{ or } \frac{1}{5} \quad (1)$$

Altogether, how many certificates had these students received?

$$\begin{aligned} & (1 \times 21) + (2 \times 19) + (2 \times 14) + (4 \times 15) + (6 \times 12) \\ & = 21 + 38 + 28 + 60 + 72 \\ & = 219 \end{aligned} \quad (2)$$

22. Tick the scatter graph that shows **positive** correlation.



✓

(1)

- 23.

Formula to change temperature in °C to °F

Multiply the temperature in °C by $\frac{9}{5}$ then add 32

Change -15°C to $^{\circ}\text{F}$ $(-15 \times 9/5) = -27$ $-27 + 32 = 5^{\circ}\text{F}$ (2)

24.

Before a pay rise	After a pay rise
£9.00	£9.50

Circle the value that shows the approximate **percentage increase**

2% **4%** **6%** **8%** 10% (1)

Because 1% = 9p so 6% = 6 x 9p = 54p ≈ 50p

25.

$\frac{2}{3} = 0.\dot{6}$

What fraction is equal to $0.0\dot{6}$? $\frac{2}{30}$ **or** $\frac{1}{15}$ (1)

26. This table shows information about a group of teenagers.

Their mean age	Range of their ages
15 years and 3 months	2 years and 2 months

Complete this table to show information about **the same group** of teenagers exactly **two years later**.

Their mean age	Range of their ages
17 years and 3 months	2 years and 2 months

(2)

END OF TEST. GO BACK AND CHECK YOUR WORK