

Year 9 Procedural Revision. (with answers)

1. Write the following numbers in words

- a) 264 **Two hundred and sixty four**
 b) 13804 **Thirteen thousand, eight hundred and four**
 c) 4538080 **Four million, five hundred and thirty eight thousand and eighty.**

2. Write the following words in numbers

- a) One thousand, six hundred and four **1604**
 b) Two thousand, one hundred and five **2105**
 c) Six hundred thousand, four hundred and thirty five. **600435**

3. Fill in the missing number

- a) $3543 + 182 =$ **3725** b) $4836 - 1098 =$ **3738** c) $3862 -$ **1153** $=$ 2709
 d) $1568 +$ **1311** $=$ 2879 e) $9 \times$ **3** $=$ 27 f) $72 \div$ **8** $=$ 9
 g) **5** \times 6 = 30 h) **28** \div 7 = 4

4. Find the value of

- a) 5^2 **25** b) 8^2 **64** c) 12^2 **144** d) $\sqrt{36}$ **6** e) $\sqrt{81}$ **9** f) $\sqrt{49}$ **7** g) 4^3 **64** h) 2^3 **8** g) 10^3 **1000**
 i) $\sqrt[3]{27}$ **3** j) $\sqrt[3]{64}$ **4**
 k) the reciprocal of 2 **$\frac{1}{2}$** l) the reciprocal of 10 **$\frac{1}{10}$** m) the reciprocal of $\frac{1}{2}$ **2** n) the reciprocal of $\frac{2}{5}$ **$\frac{5}{2}$**

5. Write the following numbers in standard form

- a) 2390000 b) 39400 c) 3000000000 d) 0.0087 e) 0.000145
 2.39×10^6 **3.94×10^4** **3.0×10^9** **8.7×10^{-3}** **1.45×10^{-4}**

6. Write the following as ordinary numbers

- a) 1.4×10^3 b) 3.56×10^6 c) 4.9×10^{-3} d) 5.96×10^{-7}
1400 **3560000** **0.0049** **0.000000596**

7. Write the following improper fractions as mixed number fractions

- a) $\frac{5}{4}$ **$1\frac{1}{4}$** b) $\frac{8}{3}$ **$2\frac{2}{3}$** c) $\frac{26}{5}$ **$5\frac{1}{5}$** d) $\frac{45}{7}$ **$6\frac{3}{7}$**

8. Write the following mixed number fractions as improper fractions

- a) $3\frac{1}{4}$ **$\frac{13}{4}$** b) $5\frac{2}{5}$ **$\frac{27}{5}$** c) $2\frac{2}{7}$ **$\frac{16}{7}$** d) $7\frac{7}{9}$ **$\frac{70}{9}$**

9. Fill in the table below

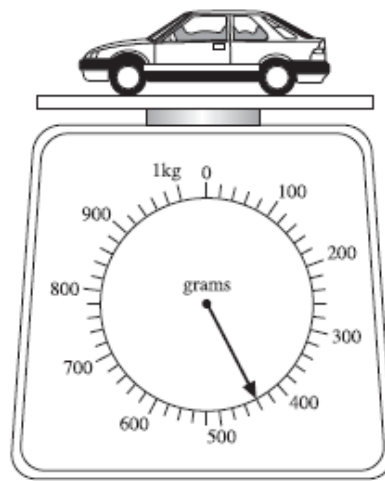
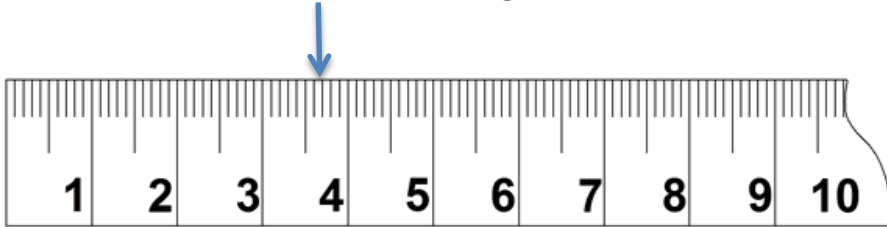
Fraction	Percentage	Decimal
$\frac{1}{2}$	50%	0.5
$\frac{1}{4}$	25%	0.25
$\frac{1}{10}$	10%	0.1
$\frac{1}{5}$	20%	0.20
$\frac{2}{5}$	40%	0.40
$\frac{3}{10}$	30%	0.3
$\frac{3}{4}$	75%	0.75

10. Place the following fractions in order of size, smallest first

- $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{10}$ $\frac{1}{5}$ $\frac{3}{10}$
 $\frac{1}{10}$ $\frac{1}{5}$ $\frac{3}{10}$ $\frac{1}{2}$ $\frac{3}{4}$

11. Find
 a) 10% of 320 **32** b) 20% of 320 **64** c) 30% of 320 = 96
 d) 1% of 560kg **5.6kg** e) 6% of 560kg **33.6kg**
12. Find the value of
 a) $\frac{3}{5}$ of 20kg **12kg** b) $\frac{2}{7}$ of 35g **10g** c) $\frac{7}{10}$ of £2 **£1.40** d) $\frac{3}{4}$ of 124m **93m**
13. (a) Write 3 as a percentage of 10 **30%** (b) Write 12 as a percentage of 25 **48%**
14. a) Share 160 sweets in the ratio of 1 : 9 **16, 144** b) Share £150 in the ratio of 2 : 3 : 5 **30, 45, 75**
 c) Tim shared 50 pens between himself and his friend Tom in the ratio of 4: 1. How many pens will each boy receive? **Tim 40, Tom 10**
 d) If 6 apples cost £1.80, how much would 15 apples cost? **£4.50**
15.
 a) $0 \cdot 33 + 8 \cdot 2 =$ **8.53** b) $78 \cdot 335 - 38 \cdot 2 =$ **40.135** c) $35.938 + 7.82 + 9 =$ **52.758**
 c) $0 \cdot 3 \times 2 =$ **0.6** d) $8 \times 0 \cdot 02 =$ **0.16** e) $64 \div 0 \cdot 8 =$ **80**
 f) $39 \div 0 \cdot 3 =$ **130** g) $24 \div 0.03 =$ **800** h) $35 \times 18 =$ **630**
 i) $374 \times 82 =$ **30668** j) $1250 \div 25 =$ **50**
16. Estimate the total of the following lengths
 1.95m, 3.75m, 1.2m, 7.05m.
 $2 + 4 + 1 + 7 = 14\text{m}$
17. Tom bought 9 packets of sweets for his friends. Each packet of sweets cost £1.95. **Estimate** how much Tom spent on the sweets. **20p**
18. Round the following values correct to 1 decimal place.
 a) 83.23 **83.2** b) 3.78 **3.8** c) 0.372 **0.4** d) 0.999 **1.0**
 Round the following values correct to 2 decimal places.
 e) 12.736 **12.74** f) 43.781 **43.78** g) 80.372 **80.37** h) 0.999 **1.00**
 Round the following values correct to 3 decimal places.
 i) 12.4764 **12.476** j) 83.7850 **83.785** k) 290.3728 **290.373** l) 0.9999 **1.000**
 Round the following values correct to 1 significant figure.
 m) 465 **500** n) 5368 **5000** o) 8.87 **9** p) 0.99 **1**
 Round the following values correct to 2 significant figures.
 q) 2871 **2900** r) 8310 **8300** s) 90.3728 **90** t) 0.9999 **1.0**
19. Round the following to the nearest *penny*
 a) £38.876 **£38.88** b) £198.820 **£198.82** c) £99.999 **£100**
20. Round the following to the nearest *tenth* of a second
 a) 3.928 seconds **3.9s** b) 7.952 seconds **8.0s** c) 87.975 seconds **88.0s**
21. Round the following to the nearest *hundredth* of a second
 a) 3.928 seconds **3.93s** b) 7.952 seconds **7.95s** c) 87.975 seconds **87.98s**
22. a) Write down all of the multiples of 4 between 20 and 40 **20,24,28,32,36,40**
 b) Write down all of the multiples of 9 between 60 and 120 **63,72,81,108,117**
 c) Write down all of the multiples of 12 between 50 and 150 **60, 72,84,96, 108, 120, 132, 144**
23. a) Write down all of the factors of 20 **1, 2, 4, 5, 10, 20**
 b) Write down all of the factors of 36 **1, 2, 3, 4, 6, 9, 12, 18, 36**
 c) Write down all of the factors of 56 **1, 2, 4, 7, 8, 14, 28, 56**

24. a) Find the value of $(3 + 3)^2 \times 5$ **45**
 b) Find the value of $5 - 4 + (6 \times 5)$ **31**
 c) Find the value of $(3 \times 6^2) + 7 \times 4$ **136**
25. Susan changed £400 into Euros when the exchange rate was £1 = 1.15€. How many euros did Susan receive? **460€**
26. Read the value on each of the following scales. **3.7**

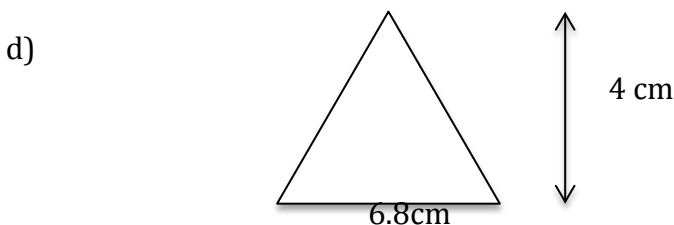
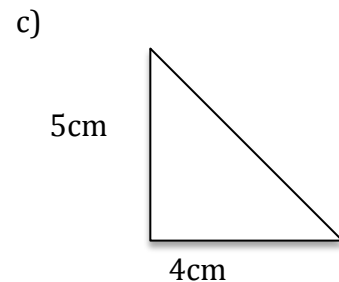
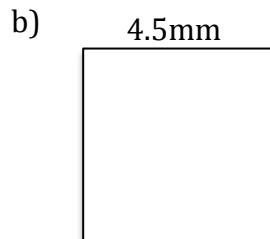
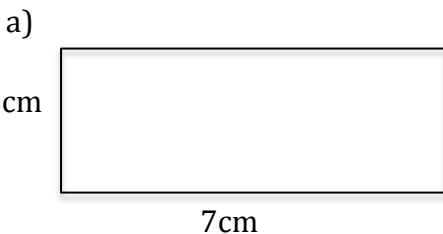


The toy car weighs g.

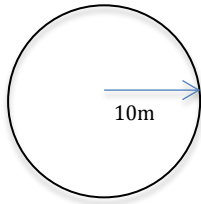
440g

27. Convert the following measurements into the units in brackets.
- a) a) 37cm (mm) **370mm** b) 4976m (km) **4.976km** c) 398g (mg) **3980mg** d) 29mm (cm) **2.9cm**
 e) 4.5L (ml) **4500ml** f) 8kg (g) **8000g** g) 1872m (km) **1.872km** h) 7.9m (cm) **790cm**

28. Find the perimeter and area of each of the following shapes clearly stating the units of your answer.

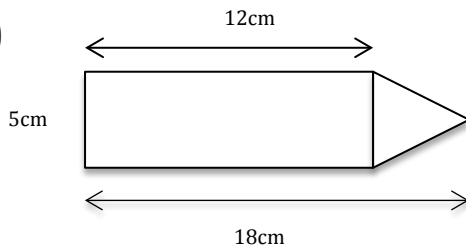


e)



Find the circumference and area of the circle using $\pi = 3.14$.

f)

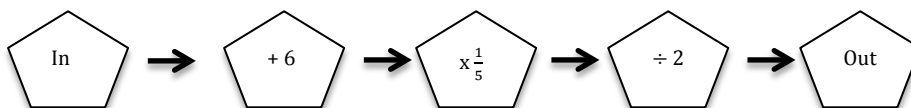


- a) $P = 20\text{cm}$
 $A = 21\text{cm}^2$
- b) $P = 18\text{mm}$
 $A = 20.25\text{mm}^2$
- c) $A = 10\text{cm}^2$
- d) $A = 13.6\text{cm}^2$
- e) $C = 62.8\text{cm}$ $A = 314.2\text{cm}^2$
- f) $A = 60 + 15 = 75\text{cm}^2$

29. Eric travelled 90 miles in 2 hours. Calculate the average speed that Eric travelled at. **45mph**

30. Find the mean, median, mode and range of
12, 15, 17, 15, 16, 15, 15.
Mean = 15, Median = 15, Mode = 15, Range = 5

31.



Find the output when the input is 14. **2**