Please make sure that you print this resource at 100% so that all measurements are correct.
To do this, follow the relevant steps below.

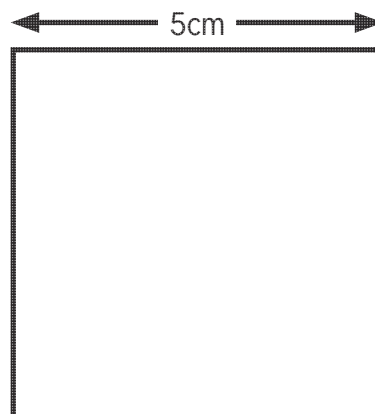**Adobe Reader or Adobe Acrobat**
- Adobe Reader is a free PDF viewer, from Adobe. To install a copy of Adobe Reader, go to https://get.adobe.com/uk/reader/.

- Once Adobe Reader is installed, open your PDF.

- Go to File>Print.

- Under 'Page Sizing & Handling', select 'Size'.

- From here, make sure that 'Actual Size' is selected.

- Print this page as a test, making sure that the shape below is the correct size once printed.

- If the test print is correct, print your PDF.

Foxit Reader
- Go to File>Print.

- Set the 'Scaling' to 'None'.

- Print this page as a test, making sure that the shape below is the correct size once printed.

- If the test print is correct, print your PDF.

Web Browser
- If printing from a web browser, such as Chrome, Firefox or Microsoft Edge make sure that your printer is set to print at 100%, either by unticking 'Fit to Page' or selecting 'Actual Size'.

- Print this page as a test, making sure that the shape below is the correct size once printed.
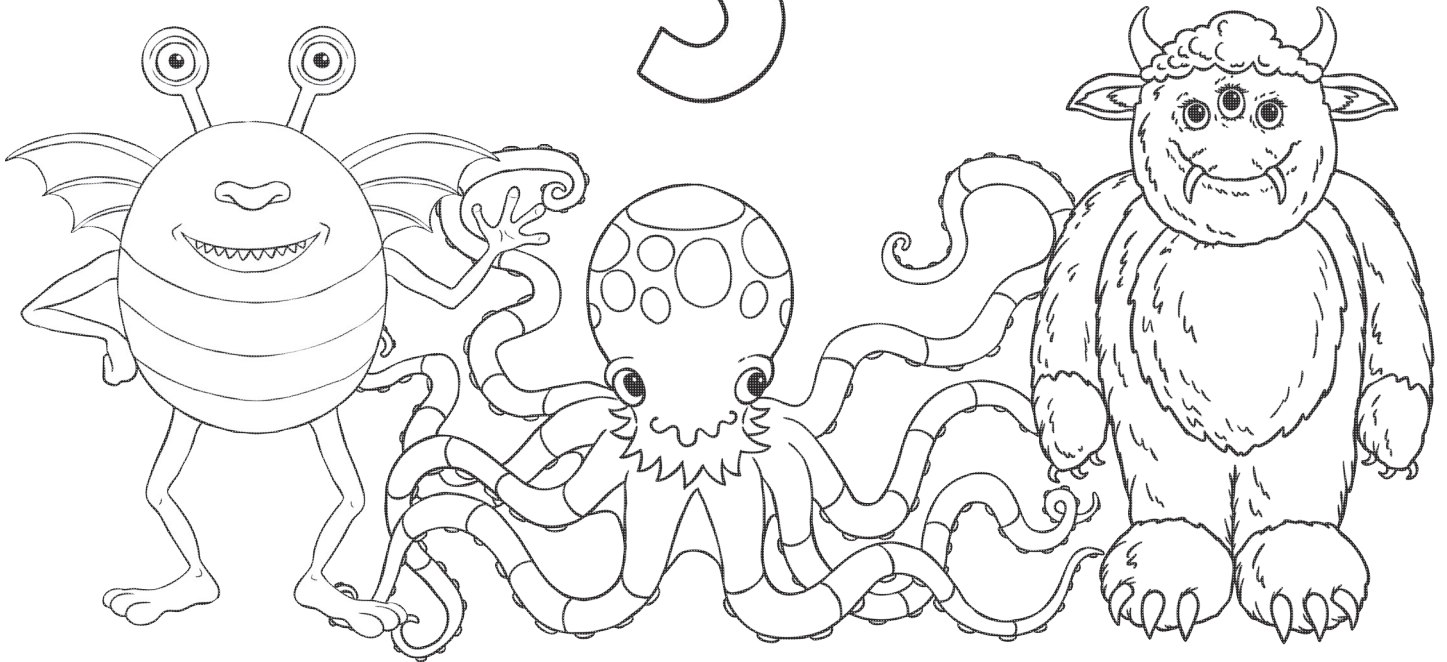
- If the test print is correct, print your PDF.

← 5cm →
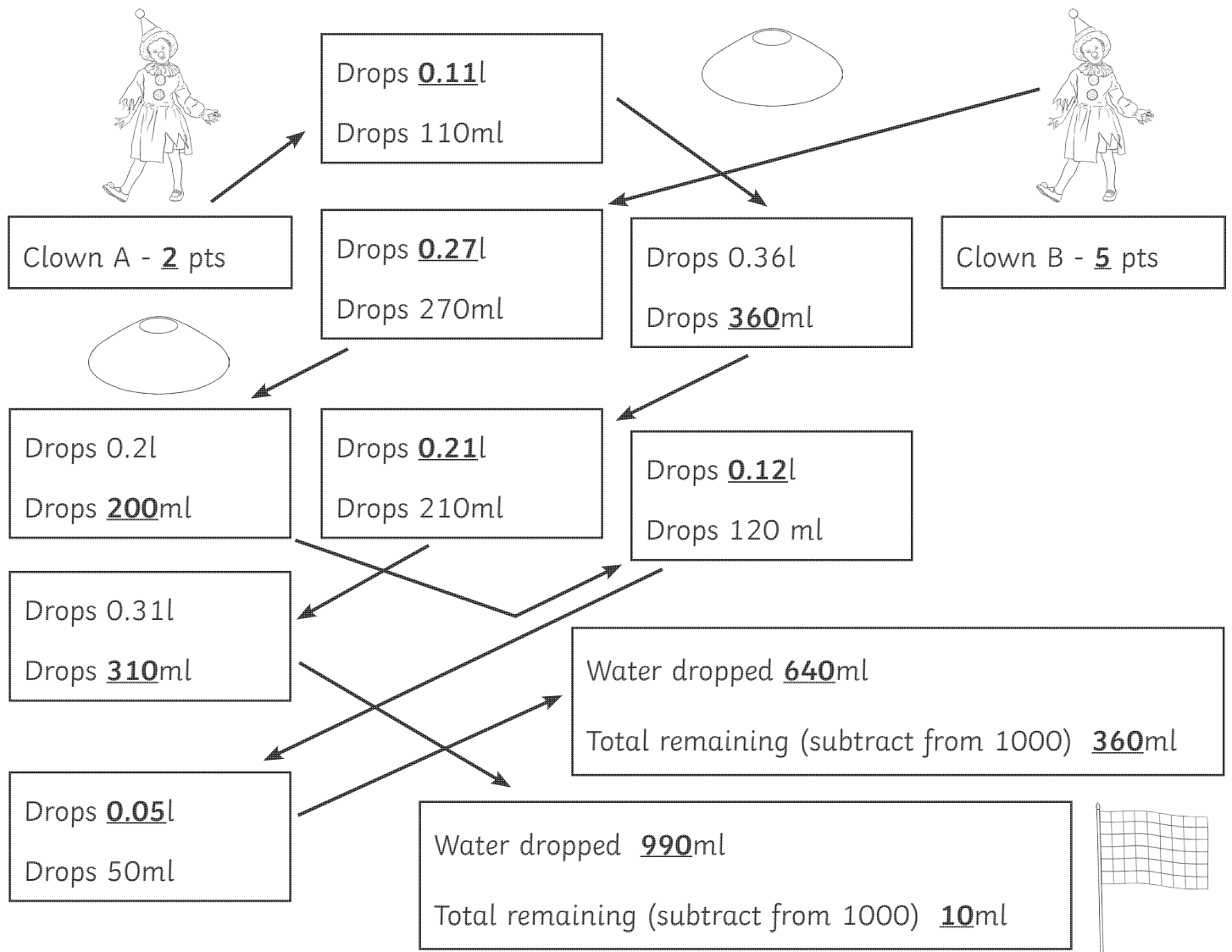
Home Learning Year 4 Maths Activity Book

Measures

Answers

Year 4 Programme of Study – Measures

Statutory Requirements	Worksheet	Page Number	Notes
Convert between different units of measure.	It's a Knockout Converting Measurements with a Place Value Chart	1 2	
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Measure and calculate the perimeter of a rectilinear figure	3	
Find the area of rectilinear shapes by counting squares.	Calculate Area by Counting Squares	4	
Estimate, compare and calculate different measures, including money in pounds and pence.	Estimating and Comparing Measures Money Problems Maths with Measures Worksheet	5 6,7 8	
Read, write and convert time between analogue and digital 12- and 24-hour clocks.	Converting Time Worksheet	9	
Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.	Converting Space Units of Time	10	

It's a Knockout – Litres and Millilitres

Drops **0.11**l

Drops 110ml

Clown A - **2** pts

Drops **0.27**l

Drops 270ml

Drops 0.36l

Drops **360**ml

Clown B - **5** pts

Drops 0.2l

Drops **200**ml

Drops **0.21**l

Drops 210ml

Drops **0.12**l

Drops 120 ml

Drops 0.31l

Drops **310**ml

Water dropped **640**ml

Total remaining (subtract from 1000)   **360**ml

Drops **0.05**l

Drops 50ml

Water dropped   **990**ml

Total remaining (subtract from 1000)   **10**ml

Converting Measurements with a Place Value Chart

mm	cm	m
2000	200	2
300	30	**0.3**
160	16	**0.16**
3400	**340**	3.4
67	**6.7**	**0.067**
450	45	**0.45**
1800	**180**	1.8
346	**34.6**	**0.346**
1900	190	**1.9**
990	99	**0.99**
10000	**1000**	10
1568	**156.8**	**1.568**

Measure and Calculate the Perimeter of a Rectilinear Figure

The Perimeter of Squares

1. Side 1 = 9cm
   Perimeter = 36cm

2. Side 1 = 1cm
   Perimeter = 4cm

3. Side 1 = 3cm
   Perimeter = 12cm

4. Side 1 = 6cm
   Perimeter = 24cm

5. Side 1 = 9cm
   Side 2 = 7cm
   Perimeter = 32cm

6. Side 1 = 4cm
   Side 2 = 3cm
   Perimeter = 14cm

7. Side 1 = 9cm
   Side 2 = 3cm
   Perimeter = 24cm

8. Side 1 = 7cm
   Side 2 = 5cm
   Perimeter = 24cm

9. Side 1 = 1cm
   Side 2 = 6cm
   Perimeter = 14cm

10. Side 1 = 7cm
    Side 2 = 2cm
    Perimeter = 18cm

Calculating the Area of Shapes by Counting Squares

1. 11 cm^2

2. 7 cm^2

3. 12 cm^2

4. 17 cm^2

5. 16 cm^2

6. Answers will vary.

Estimating and Comparing Measures

*Approximate based on average sizes:

1. Medium sized car = 1360 kg, Average adult = 76 kg (UK)
    Answer = Approximately 18 adults!

2. Bus = Average length 7 metres, Pencil = 19cm
    Answer = Approximately 37 pencils!

3. Film = Average length 110 minutes, Cartoon = Average length 10 minutes
    Answer = Approximately 11 cartoons

4. Woman = Average height 161cm (UK), Beans – Tin height 10.6cm
    Answer = Approximately 15!

5. Elephant = Average weight 5000kg (Asian Elephant), Fridge = 90kg
    Answer = Approximately 60!

6. Apple = Average weight = 100g, Egg = Average weight = 50g
    Answer = Approximately 2!

7. Pop Song = Average length 3 minutes, TV advert = Average length 30 seconds
    Answer = Approximately 6!

8. Lorry = Average height 4 metres, Cat = Average height 25cm
    Answer = Approximately 16!

Money Problems

1. I buy a pen for £1.70 and a notepad for £3.20. How much have I spent altogether?

   £4.90

2. I buy three cakes for £1.86 each. How much have I spent altogether?

   £5.58

3. I bought one bike for £39.98 and one scooter for £9.78. How much have I spent altogether?

   £49.76

4. I bought two pairs of socks at £2.21 each and 3 bunches of flowers priced £4.70 each. How much have I spent altogether?

   £18.52

5. I bought two jumpers priced £15.60 each and four lollipops for 30p each. How much have I spent altogether?

   £32.40

6. Sam and 3 of his friends bought a drink each for £1.75. How much did they spend in total?

   £7.00

7. I bought one jumper for £13.00, one pair of shoes for £24.39 and a bag for £12.50. How much did I spend altogether?

   £49.89

8. John bought 3 brownies at a bake sale. If each brownie cost £0.25 and he paid with a twenty pound note, how much change does he get?

   £19.25

9. Jenny bought 4 cans of pop at the shop. If each can cost her £1.60 and she paid with a twenty pound note how much change does she get back?

£13.60

10. Harry bought 4 bunches of bananas at the greengrocers. Each bunch cost £0.79. how much change would he get if he paid with a twenty pound note?

£16.84

11. Julia got given a gift card for her birthday with £20 of store credit. She bought a dress that cost £16.67 using the gift card. How much money does she have left on the gift card?

£3.33

12. Paul bought a book from the book shop. If it costs £6.23, how much change would Paul get back if he paid with a twenty pound note?

£13.77

13. Helen bought an ornament from a gift shop. It cost £19.67. How much change will Helen receive if she paid with a twenty pound note?

£0.33

14. Annie bought 4 chocolate bars to give to her friends. Each one cost £1.43. How much change will she receive if she pays with a twenty pound note?

£14.28

Maths with Measures

1. I have a 3m piece of ribbon and use 50cm of it to make a card. How much ribbon do I have left?

   2.5m or 250cm

2. Show your working out underneath. How many 25mm slices of rock can be made from one 2m piece of rock?

   80 slices

3. Imperial measurements: **1oz = 30g**

   1 pint = 568ml

   What are the metric measurements of these?

   a) 10 oz = **300g**

   a) 3 oz = **90g**

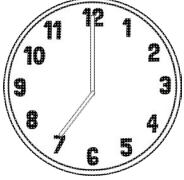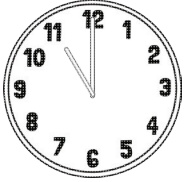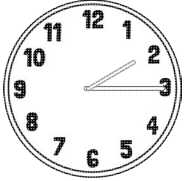   a) 6 oz = **180g**

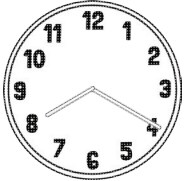   a) Half a pint = **284ml**
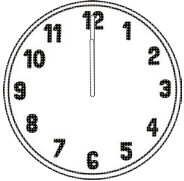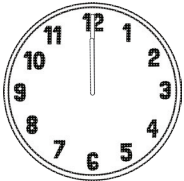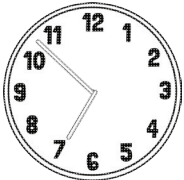
   a) 4 pints = **2272ml**

4. I have a 10 kg bag of potatoes, but dropped a quarter of them on the way home. How many grams of potatoes do I have left?

   7.5kg

5. There is 500ml of water in the small bottle. The big bottle contains 4 and a half times as much. How much water is in the big bottle?

   2250ml

Converting Time

Time in Words	24 Hour Clock	12 Hour Clock	Analogue
seven o'clock in the evening	19:00	7:00p.m.	
eleven o'clock in the morning	**11:00**	11:00a.m.	
quarter past two in the afternoon	14:15	**2:15 pm**	
twenty past eight in the morning	8:20	8:20p.m	
midday	**12:00**	**12:00 midday**	
twenty to seven in the evening	18:40	6:40p.m.	
midnight	0:00	**12:00 midnight**	
seven minutes to eight at night	**19:53**	**7:53 pm**	

Converting Space Units of Time

1. 36 months

2. 510 seconds

3. 1392 hours

4. 90 minutes

5. 153 hours

6. 72 hours

7. 12 weeks and 4 days

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