

Warwick School



11+ Sample Paper

Mathematics

Please write your full name here:

Before you start read these instructions:

- This test lasts 45 minutes
- We would like to see how you worked out your answers, so show your working. We may be able to give you marks even if the answer is wrong.
- If you get stuck, do not worry. Do not spend lots of time on it, just go on to the next question. You may have time at the end to try the question again.
- Do **not** use a calculator.

Remember to show your working

1. Work out:

a) $2782 + 469$

Answer: _____ [1]

b) $8265 - 981$

Answer: _____ [1]

c) 524×8

Answer: _____ [1]

d) $1092 \div 7$

Answer: _____ [1]

2. Calculate

a) $\frac{4}{5} - \frac{1}{3}$

Answer: _____ [3]

b) $\frac{2}{3} \times \frac{5}{8}$

Answer: _____ [3]

Remember to show your working

3. Find the next two numbers in these sequences:

a) 3, 7, 11, 15, 19, ,

b) 34, 29, 24, 19, ,

c) 1, 3, 6, 10, 15, , [3]

4. 732 Worcester Warriors fans meet at Sixways stadium to travel to Northampton to watch a rugby match. There are 14 coaches to transport them each of which can take 50 fans.

a) How many fans can travel in the coaches?

Answer: _____ [2]

b) The fans that cannot fit onto the coaches are transported by taxi. Each taxi can transport 4 fans. How many taxis are needed?

Answer: _____ [2]

5. Work out $6 \times 14 - 13 \times 5$

Answer: _____ [2]

Remember to show your working

6. Freddie spends $\frac{3}{4}$ of his pocket money each week. If he has £6 pocket money, how much money does he spend?

Answer: £_____ [2]

7. How many centimetres are there in 3.4 metres?

Answer: _____ cm [1]

8. Write 30 as a product of three prime numbers.

Answer: _____ [3]

9. There are two pine trees standing in the middle of a field. It is a sunny day. The larger tree, which is 30 metres high, has a shadow that is 20 metres long. The smaller tree has shadow that is only 12 metres long. How high is the smaller tree?

Answer: _____ m [3]

10. A chicken in a butcher's shop weighs 3250 grams. What is this in kilograms?

Answer: _____ kg [1]

Remember to show your working

11. Last night the temperature was -5°C but today it is 8°C . By how much has the temperature gone up?

Answer: _____ $^{\circ}\text{C}$ [1]

12. Convert these to decimals:

a) 84%

Answer: _____ [1]

b) 8%

Answer: _____ [1]

c) $\frac{3}{5}$

Answer: _____ [2]

13. An electrician charges $\pounds 30$ to visit a house, plus $\pounds 25$ for every hour he spends there. If he stays for h hours, write down a formula for the total cost, $\pounds C$, of his visit.

Answer: _____ [3]

14. A train leaves Manchester Piccadilly station at 08:24 and arrives at London Euston at 12:03. How long did the journey take?

Answer: _____ hours _____ minutes [2]

Remember to show your working

15. A particular fruit drink is made by mixing apple juice and orange juice in the ratio 5:2. How much apple juice is needed to make 35 litres of the fruit drink?

Answer: _____ [3]

16. I think of a number, subtract 4 and then multiply by 5 and the result is 25. What was the number I thought of?

Answer: _____ [2]

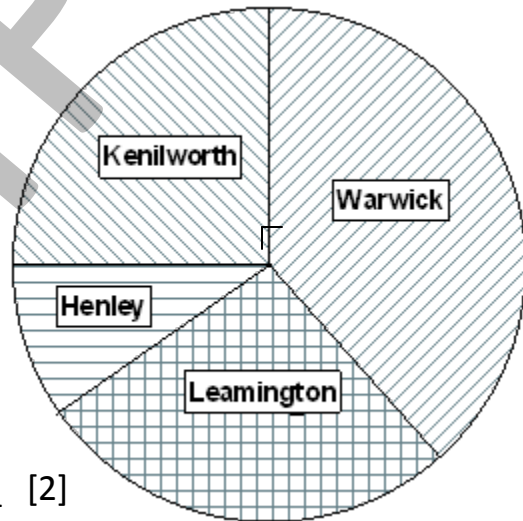
17. The pie chart shows the different towns in which 20 boys at Warwick School live.

- a) In which town did fewest boys live?

Answer: _____ [1]

- b) How many boys lived in Kenilworth?

Answer: _____ [2]



18. Work out 216×53

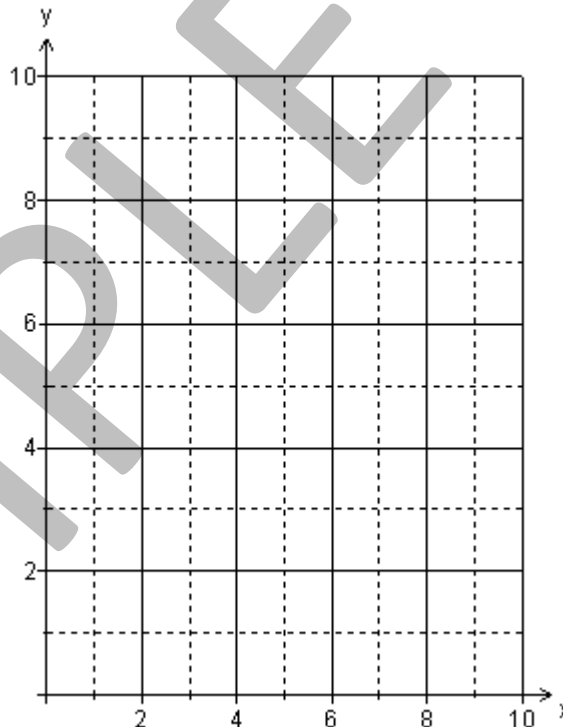
Answer: _____ [2]

Remember to show your working

19. Work out $8099 \div 13$

Answer: _____ [2]

20. a) Plot the points (2,2), (8,2), (7,7) and (3,7) and join them up to make a shape.

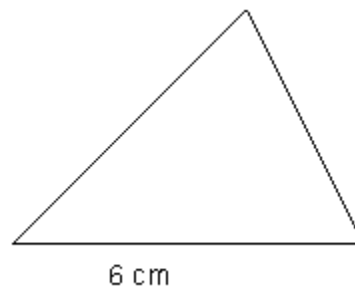
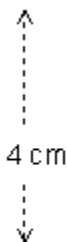
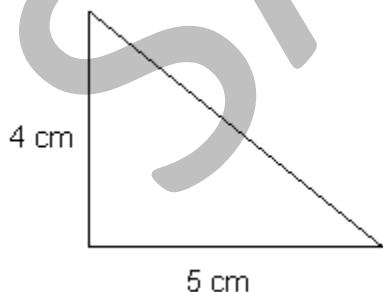


[2]

b) What name is given to this shape?

Answer: _____ [1]

21. Work out the area of these triangles.



Answer: _____ cm^2 [2]

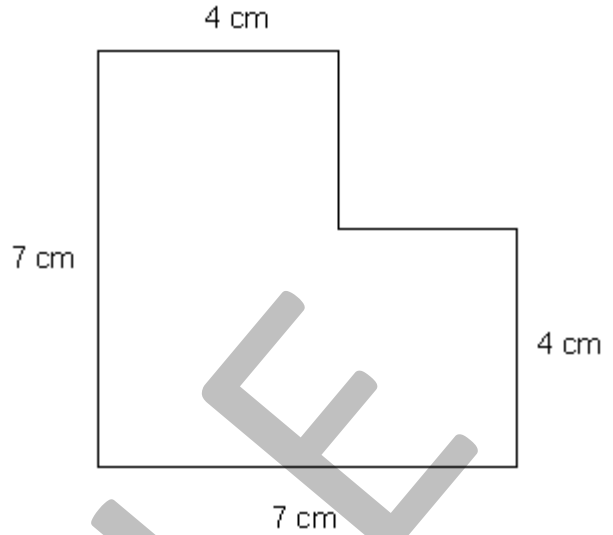
Answer: _____ cm^2 [2]

Remember to show your working

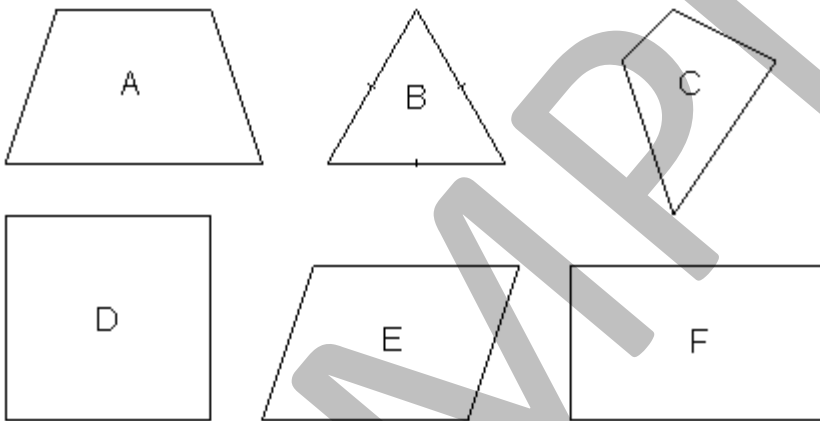
22. Find the perimeter and area of this shape.

Perimeter = _____ cm [2]

Area = _____ cm² [2]



23.



The diagram shows six shapes labelled A to F.

a) Which shape has one line of symmetry and no rotational symmetry?

Answer: _____ [1]

b) Which shape has two lines of symmetry and rotational symmetry order 2?

Answer: _____ [1]

c) Which shape has no line symmetry and rotational symmetry order 2?

Answer: _____ [1]

d) Which shape has rotational symmetry of order 3?

Answer: _____ [1]

Remember to show your working

24. a) List the factors of 12.

Answer: _____ [2]

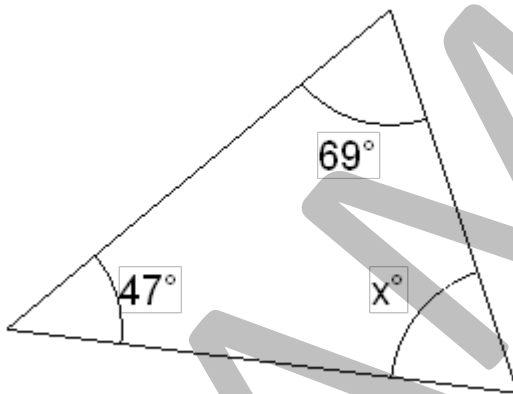
b) List the multiples of 6 that are less than 20.

Answer: _____ [2]

25. Calculate 30% of £240.

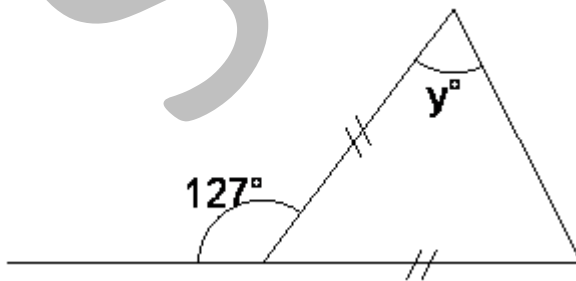
Answer: _____ [2]

26. Find x .



Answer: $x =$ _____ [2]

27. Find y .



Answer: $y =$ _____ [3]

Remember to show your working

28. Here are the number of goals scored in eight matches by a hockey team:

1, 5, 2, 4, 1, 1, 0, 2

a) What is the mean (average) number of goals scored per game?

Answer: _____ [2]

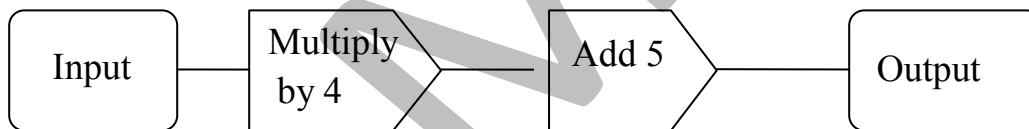
b) What is the mode of the goals scored per game?

Answer: _____ [1]

c) What is the median of the goals scored per game?

Answer: _____ [2]

29.



a) If the input is 3, what is the output?

Answer: _____ [1]

b) If the output is 33, what is the input?

Answer: _____ [2]

c) If the input is x , what is the output?

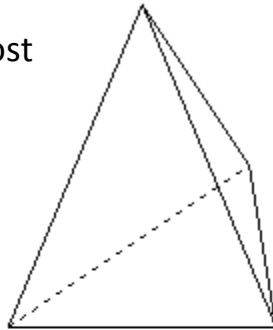
Answer: _____ [2]

Remember to show your working

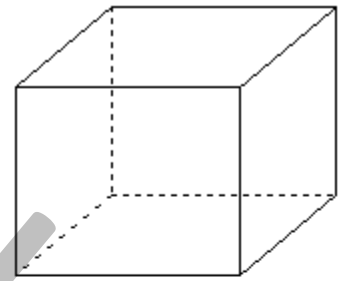
30. Here are drawings of four three-dimensional shapes.

a) Which shape has the most faces?

_____ [1]



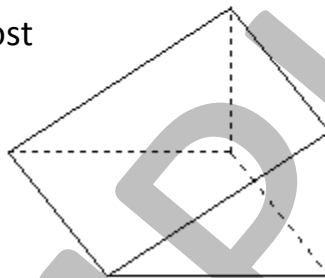
Tetrahedron



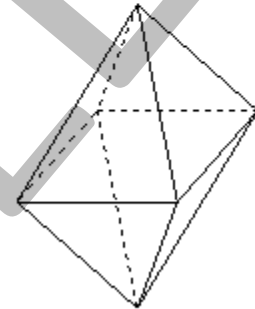
Cuboid

b) Which shape has the most corners?

_____ [1]



Triangular Prism



Octahedron

31. a) $\frac{6}{5} \times \frac{5}{4} \times \frac{4}{3} \times \frac{3}{2} \times \frac{2}{1} =$

Answer: _____ [2]

b) $\frac{100}{99} \times \frac{99}{98} \times \frac{98}{97} \times \dots \times \frac{4}{3} \times \frac{3}{2} =$

Answer: _____ [3]

Remember to show your working

32. a) What is the last digit in 2013^2 ?

Answer: _____ [1]

b) What is the last digit in 2013^3 ?

Answer: _____ [1]

c) What is the last digit in 2013^4 ?

Answer: _____ [1]

d) What is the last digit in 2013^5 ?

Answer: _____ [1]

e) What is the last digit in 2013^{12} ?

Answer: _____ [1]

f) What is the last digit in 2013^{57} ?

Answer: _____ [1]

END OF EXAMINATION

**Now go back, check your answers and
try any questions you may have left out.**