



Pocklington School 11+ Mathematics Sample 1 for 2020

Name	
------	--

- Time Allowed: 1 Hour
- Calculators are not allowed.
- You are advised to show your working in the spaces provided and write your answers in the spaces provided.
- Use blue or black pen.
- If you make a mistake, cross it out but do not use tippex.
- The E questions at the end of the paper are designed to be more challenging.

1. $3792 + 805$

_____ (2 marks)

2. $1375 - 68$

_____ (2 marks)

3. 25×37

_____ (2 marks)

4. $3460 \div 4$

_____ (2 marks)

5. $8.741 + 71 + 20.32$

_____ (2 marks)

6. $832 - 82.3$

_____ (2 marks)

7. 3.56×2.6

_____ (3 marks)

8. $6457 \div 11$

_____ (2 marks)

9. Fill in the missing gaps below to show the missing number in the sequence:

a. 3, 9, 15, 21, 27, _____

b. 2, 6, 18, _____, 162

c. 37, 30, 23, 16, _____

d. 1, 3, 6, 10, 15, _____

(4 marks)

10. Fill in the gaps below to make these fractions equivalent:

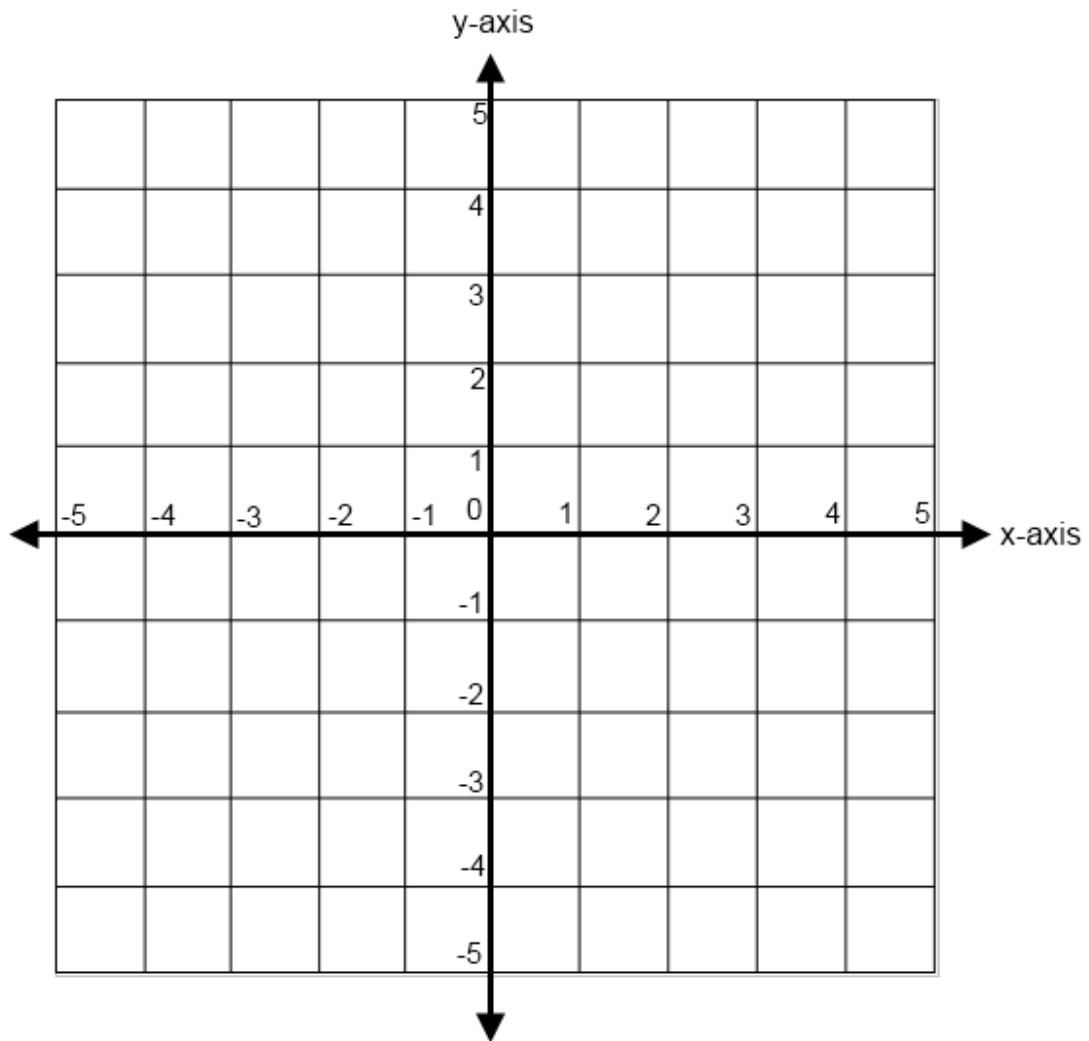
a. $\frac{3}{8} = \frac{\quad}{24}$

b. $\frac{7}{\quad} = \frac{35}{45}$

(2 marks)

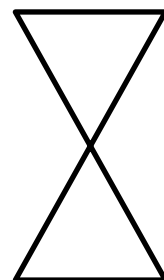
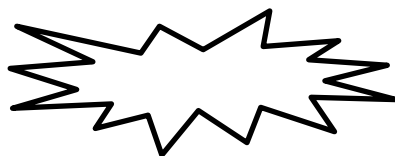
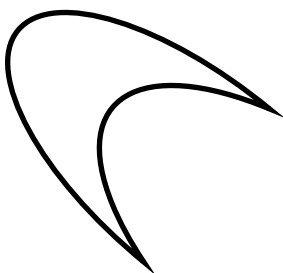
11. On the axes below, plot the points whose coordinates are $(-5, 5)$ $(4, 1)$ and $(3, -2)$
Mark each one with a cross.

(3 marks)



12. Draw in any lines of symmetry onto the 3 shapes below using a ruler.

(3 marks)



13. Square numbers can be found by multiplying a number by itself.

$4 \times 4 = 16$ so **16** is a square number

$7 \times 7 = 49$ so **49** is a square number.

Write down 2 more square numbers.

___ ___ (2 marks)

14. Fill in the gaps below:

a. $835\text{cm} =$ _____ m

(1 mark)

b. $19\text{mm} =$ _____ cm

(1 mark)

c. $725\text{ grams} =$ _____ kg

(1 mark)

d. $6.5\text{ litres} =$ _____ ml

(1 mark)

15. Calculate the perimeter of this shape:

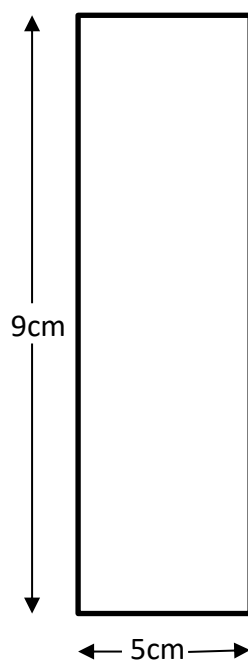


DIAGRAM NOT TO SCALE

_____ cm (1 mark)

16. Below is a list of temperatures in cities around the world.

City	Temperature in °C
Barcelona	12
Paris	4
Tokyo	- 5
Winnipeg	-18

Complete the missing sentences below:

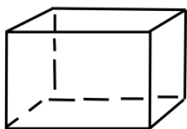
- a. The coldest city is _____
(1 mark)
- b. The difference in temperature between Barcelona and Tokyo is _____ °C
(1 mark)
- c. Paris is _____ °C warmer than Winnipeg
(1 mark)
- d. Tokyo is _____ °C colder than Paris
(1 mark)

17. How many seconds are there in 5 minutes and 13 seconds?

_____ seconds (1 mark)

18. Calculate the volume of the cuboid below, which has height 3cm, width 4cm and length 5cm.

State the units for your answer.



Volume = _____ (3 marks)

19. A primary school want to organise a trip to a theme park for a class of 30 children.

They will need to hire a coach to take them there and buy tickets for all 30 children and 4 teachers who are with them.

Each person will need to purchase a lunch.

Use the table of information below to answer the following questions:

Price to hire a coach	£450
Child cost for a theme park ticket	£17
Adult cost for a theme park ticket	£22
Cost of lunch per person	£4

- a. How much it would cost to buy the lunches for everyone, including the teachers and the bus driver?

£ _____ (2 marks)

- b. How much would it cost to buy all the tickets for the theme park, including all the children and the adults? (Not the bus driver)

£ _____ (2 marks)

- c. What is the total cost of the trip for everyone, including the cost of the coach hire?

£ _____ (3 marks)

20.

a. What fraction of this shape is shaded?



_____ (1 mark)

b. Work out $\frac{3}{7}$ of 49.

_____ (2 marks)

21. Work out the following answers:

a. $\frac{3}{11} + \frac{4}{11}$

_____ (1 mark)

b. $\frac{4}{13} - \frac{3}{26}$

_____ (2 marks)

c. $3\frac{1}{4} + \frac{1}{5}$

_____ (3 marks)

18. 500 pupils are asked which subject they prefer.
40 say they prefer Maths.
What percentage is this?

_____ (2 marks)

19. Work out the following:

a. $40 + 50 \div 2$

_____ (2 marks)

b. $(10 \div 2 \times 4) \div (10 \div 5)$

_____ (2 marks)

c. $3 \times 4 + 10 + 45 \div 9$

_____ (2 marks)

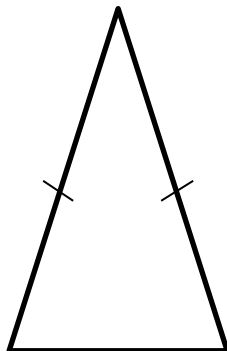
20. Write down the mathematical name for the shapes below:

a.



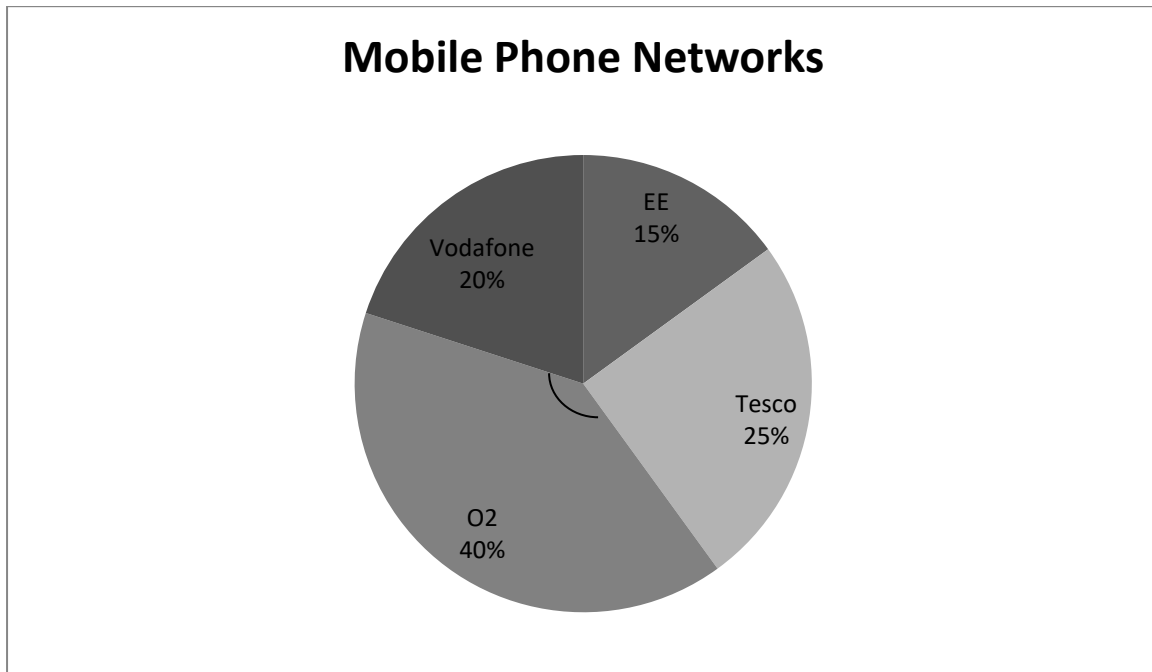
_____ (1 mark)

b.



_____ (2 marks)

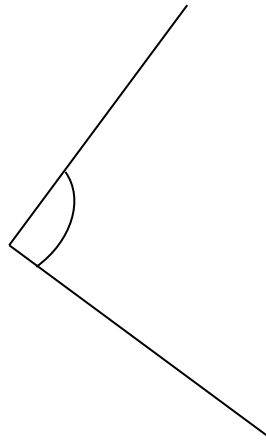
21. Below is a pie chart showing the % of people who use certain mobile phone networks. 200 people were surveyed altogether to get the information for the pie chart.



- a. Which was the most popular mobile phone network?
_____ (1 mark)
- b. How many people used O2?
_____ (2 marks)
- c. What fraction of people used Tesco?
_____ (1 mark)
- d. What angle would be used to draw the O2 part of the pie chart?
_____° (2 marks)

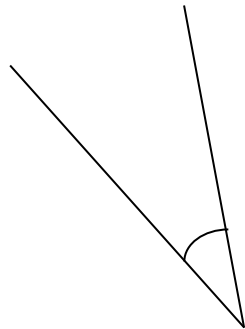
22. ESTIMATE the angles in the diagrams below. They are NOT drawn to scale so you should not need to use a protractor.

a.



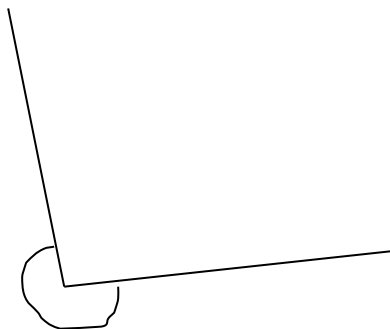
My estimate is _____° (1 mark)

b.



My estimate is _____° (1 mark)

c.





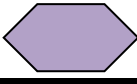
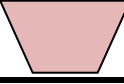


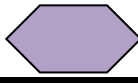
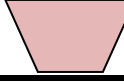


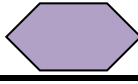



























My estimate is _____° (1 mark)


E1.


In 1924 the first ever Winter Olympics were held in Chamonix, France. Only 16 countries took part and 10 countries won medals, but can you work out who won what?


Calculate how the number of medals each symbol represents and complete the answers below. Each symbol represents a different number.


Country	Gold	Silver	Bronze	Total
Norway		7		17
Finland				11
Austria				
Switzerland				
USA				
GB				
Sweden				
Canada				
France				
Belgium				


 Stands for _____ medals.

 Stands for _____ medals.

 Stands for _____ medals.

 Stands for _____ medals.

 Stands for _____ medals.

 Stands for _____ medals.

(10 marks)

- E2. Below is a list of multiplication tables, but they are in code and each digit is represented by a different letter.
 You have to work out what number each of the letters stands for and write the numbers in the solution column.

Multiplication Table in Code

A x F = GJ

E x F = DH

C x F = GC

D x F = AB

J x F = HJ

G x F = F

GB x F = FB

F x F = AF

H x F = CH

K x F = HC

Solution

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

___ X ___ = ___

(10 marks)

END OF ASSESSMENT