



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Direct & Inverse Proportion · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Direct & Inverse Proportion

Total marks available: 75

● Direct & Inverse Proportion

Q1

[2 marks]

4 notebooks cost £4.00. Find the cost of 6 notebooks.

Q2

[2 marks]

A tap fills a bath at a steady rate. In 3 minutes it lets out 21 litres of water. How many litres does it let out in 6 minutes?

Q3

[2 marks]

2 pens cost £1.70. Find the cost of 4 pens.

Q4

[2 marks]

A tap fills a bath at a steady rate. In 6 minutes it lets out 30 litres of water. How many litres does it let out in 10 minutes?

Q5

[2 marks]

4 cinema tickets cost £42.00. Find the cost of 9 cinema tickets.

Q6

[2 marks]

Sam is paid the same amount for every hour he works. For 3 hours of work he is paid £33. How much is he paid for 2 hours of work?

Q7

[2 marks]

A tap fills a bath at a steady rate. In 10 minutes it lets out 80 litres of water. How many litres does it let out in 9 minutes?

Q8

[2 marks]

A printer prints pages at a steady rate. In 10 minutes it prints 100 pages. The number of pages is directly proportional to the time. How many pages does it print in 5 minutes?

Q9

[2 marks]

4 cinema tickets cost £46.00. Find the cost of 2 cinema tickets.

Q10

[2 marks]

2 notebooks cost £2.10. Find the cost of 6 notebooks.

Q11

[3 marks]

A sack of dog food lasts 4 days when it is used to feed 6 dogs. How many days would the same sack last if it fed 3 dogs?

Q12

[3 marks]

A sack of dog food lasts 6 days when it is used to feed 3 dogs. How many days would the same sack last if it fed 2 dogs?

Q13

[2 marks]

A recipe for 5 people needs 200 g of butter. How much butter is needed for 2 people?

Q14

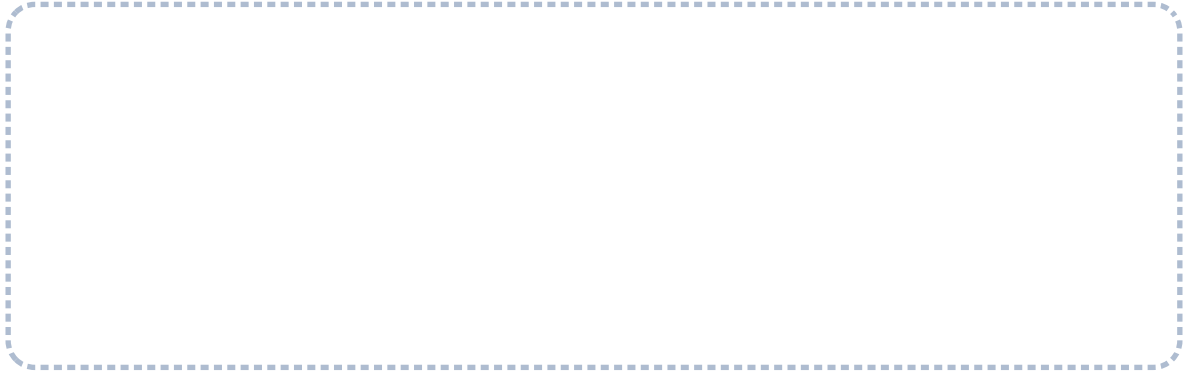
[3 marks]

Some prize money is shared equally. When it is shared between 3 people, each person gets £60. How much would each person get if it were shared equally between 6 people?

Q15

[2 marks]

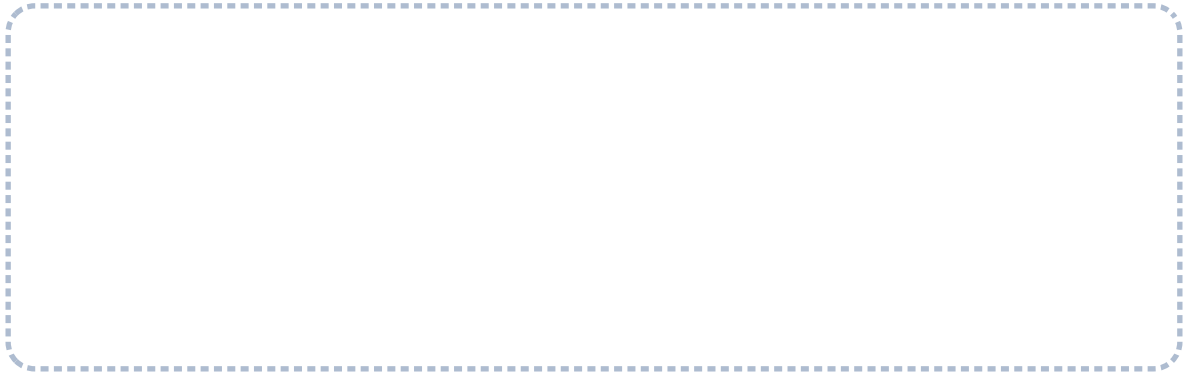
A recipe for 4 people needs 80 g of flour. How much flour is needed for 12 people?



Q16

[2 marks]

A recipe for 6 people needs 120 g of sugar. How much sugar is needed for 3 people?



Q17

[3 marks]

4 identical taps fill a tank in 20 minutes. How long would it take 2 of these taps to fill the same tank?

Q18

[2 marks]

A recipe for 6 people needs 90 g of butter. How much butter is needed for 10 people?

Q19

[2 marks]

A recipe for 6 people needs 360 g of sugar. How much sugar is needed for 15 people?

Q20

[3 marks]

A sack of dog food lasts 20 days when it is used to feed 2 dogs. How many days would the same sack last if it fed 5 dogs?

Q21

[3 marks]

3 workers take 6 days to build a wall, all working at the same rate. How many days would 6 workers take to do the same job?

Q22

[3 marks]

8 workers take 4 days to lay a patio, all working at the same rate. How many days would 4 workers take to do the same job?

Q23

[3 marks]

A shop sells cans of cola in two pack sizes.

Pack A: 8 cans of cola for £6.32

Pack B: 4 cans of cola for £3.28

Which pack is the better value for money? You must show your working.

Q24

[3 marks]

A shop sells toilet rolls in two pack sizes.

Pack A: 6 toilet rolls for £3.06

Pack B: 8 toilet rolls for £4.40

Which pack is the better value for money? You must show your working.

Q25

[3 marks]

A shop sells bottles of water in two pack sizes.

Pack A: 6 bottles of water for £4.56

Pack B: 8 bottles of water for £5.84

Which pack is the better value for money? You must show your working.

Q26

[3 marks]

6 workers take 6 days to lay a patio, all working at the same rate. How many days would 4 workers take to do the same job?

Q27

[3 marks]

2 workers take 28 days to lay a patio, all working at the same rate. How many days would 7 workers take to do the same job?

Q28

[3 marks]

A shop sells toilet rolls in two pack sizes.

Pack A: 4 toilet rolls for £1.80

Pack B: 15 toilet rolls for £6.30

Which pack is the better value for money? You must show your working.

Q29

[3 marks]

A shop sells cans of cola in two pack sizes.

Pack A: 24 cans of cola for £16.32

Pack B: 20 cans of cola for £14.40

Which pack is the better value for money? You must show your working.

Q30

[3 marks]

4 workers take 21 days to lay a patio, all working at the same rate. How many days would 7 workers take to do the same job?