

Direct Proportion

ANSWERS

1

3 pens cost £6.
How much do 5 pens cost?

3 pens = £6

2	2	2
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5 pens = £10

2	2	2	2	2
---	---	---	---	---

$$1 \text{ pen} = \boxed{£6} \div \boxed{3} = \boxed{£2}$$

$$5 \text{ pens} = \boxed{£2} \times \boxed{5} = \boxed{£10}$$

2

4 tickets cost £20.
How much do 3 tickets cost?

4 tickets = £20

5	5	5	5
---	---	---	---

3 tickets = £15

5	5	5
---	---	---

$$1 \text{ ticket} = \boxed{£20} \div \boxed{4} = \boxed{£5}$$

$$3 \text{ tickets} = \boxed{£5} \times \boxed{3} = \boxed{£15}$$

3

5 cakes cost £10.
How much do 8 cakes cost?

5 cakes = £10

2	2	2	2	2
---	---	---	---	---

8 cakes = £16

2	2	2	2	2	2	2	2
---	---	---	---	---	---	---	---

$$1 \text{ cake} = \boxed{£10} \div \boxed{5} = \boxed{£2}$$

$$8 \text{ cakes} = \boxed{£2} \times \boxed{8} = \boxed{£16}$$

4

2 books cost £10.
How much do 6 books cost?

2 books = £10

5	5
---	---

6 books = £30

5	5	5	5	5	5
---	---	---	---	---	---

$$1 \text{ book} = \boxed{£10} \div \boxed{2} = \boxed{£5}$$

$$6 \text{ books} = \boxed{£5} \times \boxed{6} = \boxed{£30}$$

5

6 cups cost £18.
How much do 4 cups cost?

6 cups = £18

3	3	3	3	3	3
---	---	---	---	---	---

4 cups = £12

3	3	3	3
---	---	---	---

$$1 \text{ cup} = \boxed{£18} \div \boxed{6} = \boxed{£3}$$

$$4 \text{ cups} = \boxed{£3} \times \boxed{4} = \boxed{£12}$$

6

3 plants cost £21.
How much do 4 plants cost?

3 plants = £21

7	7	7
---	---	---

4 plants = £28

7	7	7	7
---	---	---	---

$$1 \text{ plant} = \boxed{£21} \div \boxed{3} = \boxed{£7}$$

$$4 \text{ plants} = \boxed{£7} \times \boxed{4} = \boxed{£28}$$

7

4 bags of sand weigh 20 kg.
How much do 9 bags weigh?

4 bags = 20 kg

5	5	5	5
---	---	---	---

9 bags = 45 kg

5	5	5	5	5	5	5	5	5
---	---	---	---	---	---	---	---	---

$$1 \text{ bag} = \boxed{20} \div \boxed{4} = \boxed{5}$$

$$9 \text{ bags} = \boxed{5} \times \boxed{9} = \boxed{45}$$

8

A recipe for 2 people uses 6 eggs.
How many eggs are needed for 5 people?

2 people = 6 eggs

3	3
---	---

5 people = 15 eggs

3	3	3	3	3
---	---	---	---	---

$$1 \text{ person} = \boxed{6} \div \boxed{2} = \boxed{3}$$

$$5 \text{ people} = \boxed{3} \times \boxed{5} = \boxed{15}$$

Direct Proportion *further practice*

ANSWERS

9



4 mugs cost £24.
How much do 6 mugs cost?

4 mugs = £24

6	6	6	6
---	---	---	---

6 mugs = £36

6	6	6	6	6	6
---	---	---	---	---	---

$$1 \text{ mug} = £24 \div 4 = £6$$

$$6 \text{ mugs} = £6 \times 6 = £36$$

10



5 shirts cost £40.
How much do 3 shirts cost?

5 shirts = £40

8	8	8	8	8
---	---	---	---	---

3 shirts = £24

8	8	8
---	---	---

$$1 \text{ shirt} = £40 \div 5 = £8$$

$$3 \text{ shirts} = £8 \times 3 = £24$$

11



6 boxes hold 54 eggs.
How many eggs do 4 boxes hold?

6 boxes = 54 eggs

9	9	9	9	9	9
---	---	---	---	---	---

4 boxes = 36 eggs

9	9	9	9
---	---	---	---

$$1 \text{ box} = 54 \div 6 = 9$$

$$4 \text{ boxes} = 9 \times 4 = 36$$

12



A machine makes 12 toys in 3 minutes.
How many toys does it make in 10 minutes?

3 min = 12 toys

4	4	4
---	---	---

10 min = 40 toys

4	4	4	4	4	4	4	4	4	4
---	---	---	---	---	---	---	---	---	---

$$1 \text{ min} = 12 \div 3 = 4$$

$$10 \text{ min} = 4 \times 10 = 40$$

13



A tap fills 2 buckets in 8 minutes.
How long does it take to fill 5 buckets?

2 buckets = 8 minutes

4	4
---	---

$$8 \div 2 = 4$$

$$4 \times 5 = 20 \text{ minutes}$$

Answer 20 minutes

14



Shop A sells 5 cakes for £10.
Shop B sells 2 cakes for £6.
Which shop is cheaper for one cake?

Shop A: 5 cakes = £10

2	2	2	2	2
---	---	---	---	---

Shop B: 2 cakes = £6

3	3
---	---

$$A: £2 \text{ each}, B: £3 \text{ each}$$

Answer Shop A

15



5 tickets cost £20.
How many tickets cost £32?

5 tickets = £20

4	4	4	4	4
---	---	---	---	---

$$£20 \div 5 = £4$$

$$£32 \div £4 = 8$$

Answer 8 tickets

16



3 pens cost £6. Sam says 5 pens cost £8. He adds 2 to both numbers.
What has Sam done wrong?

3 pens = £6

2	2	2
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Sam is wrong because
he must find one pen first.

$$£6 \div 3 = £2, £2 \times 5 = £10$$

Right answer £10