



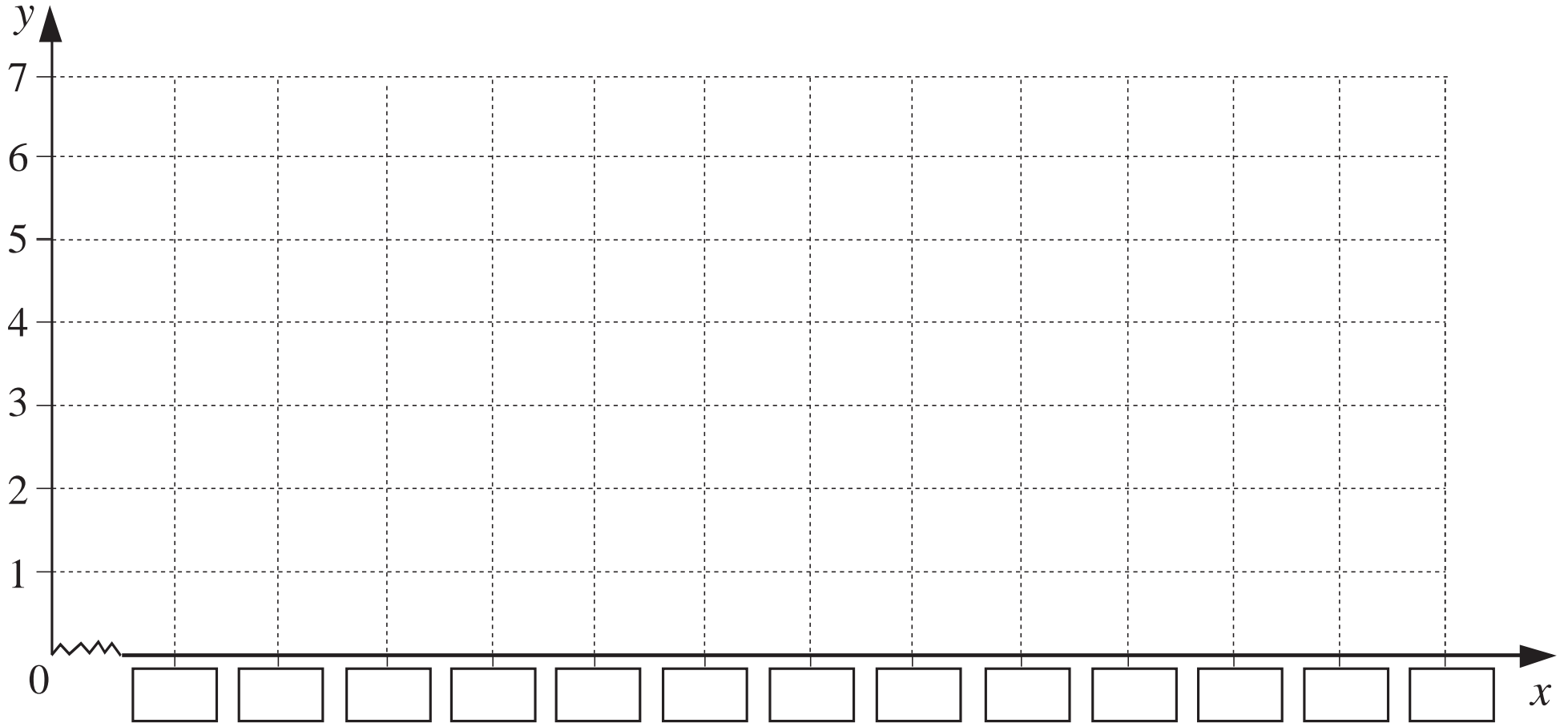
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

LP 51/2a

### Age (in months)


LP 51/2bi

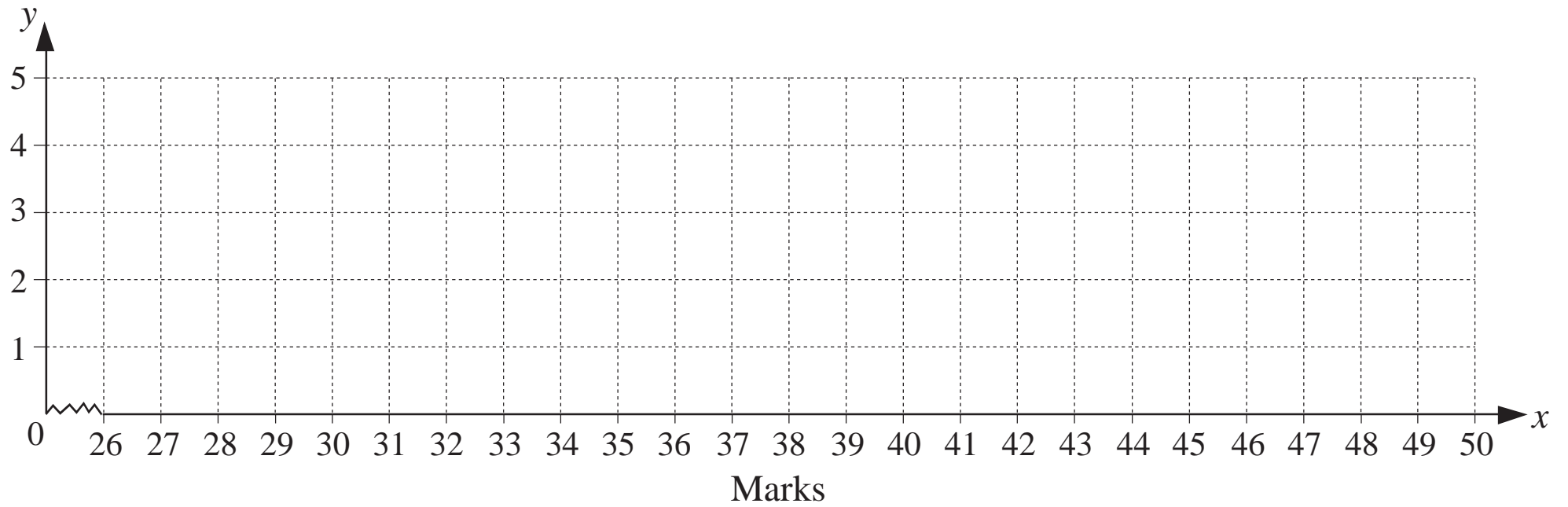
No. of pupils



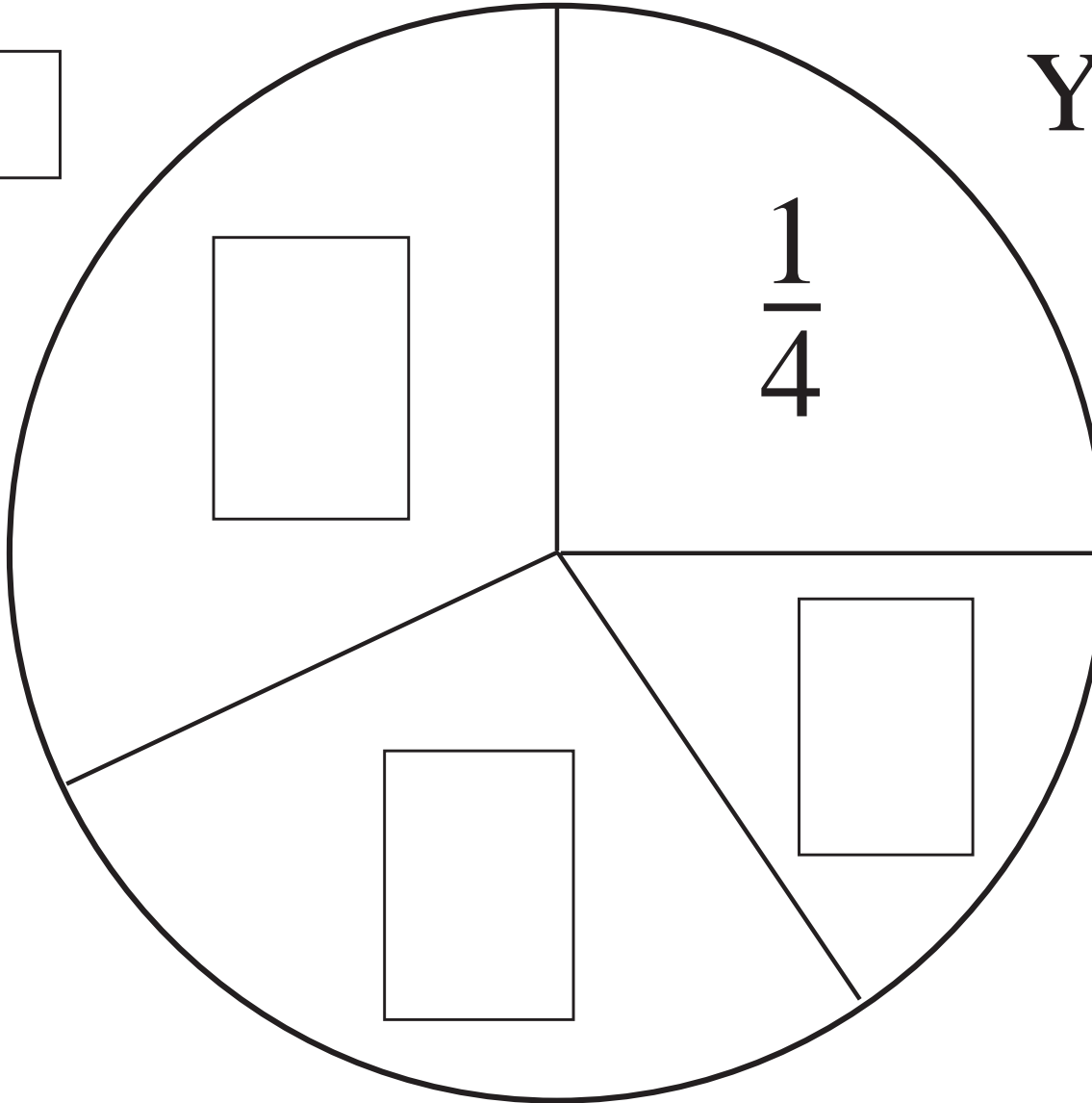
Age (months)

Mark																							
Pupils																							

No. of pupils



Year

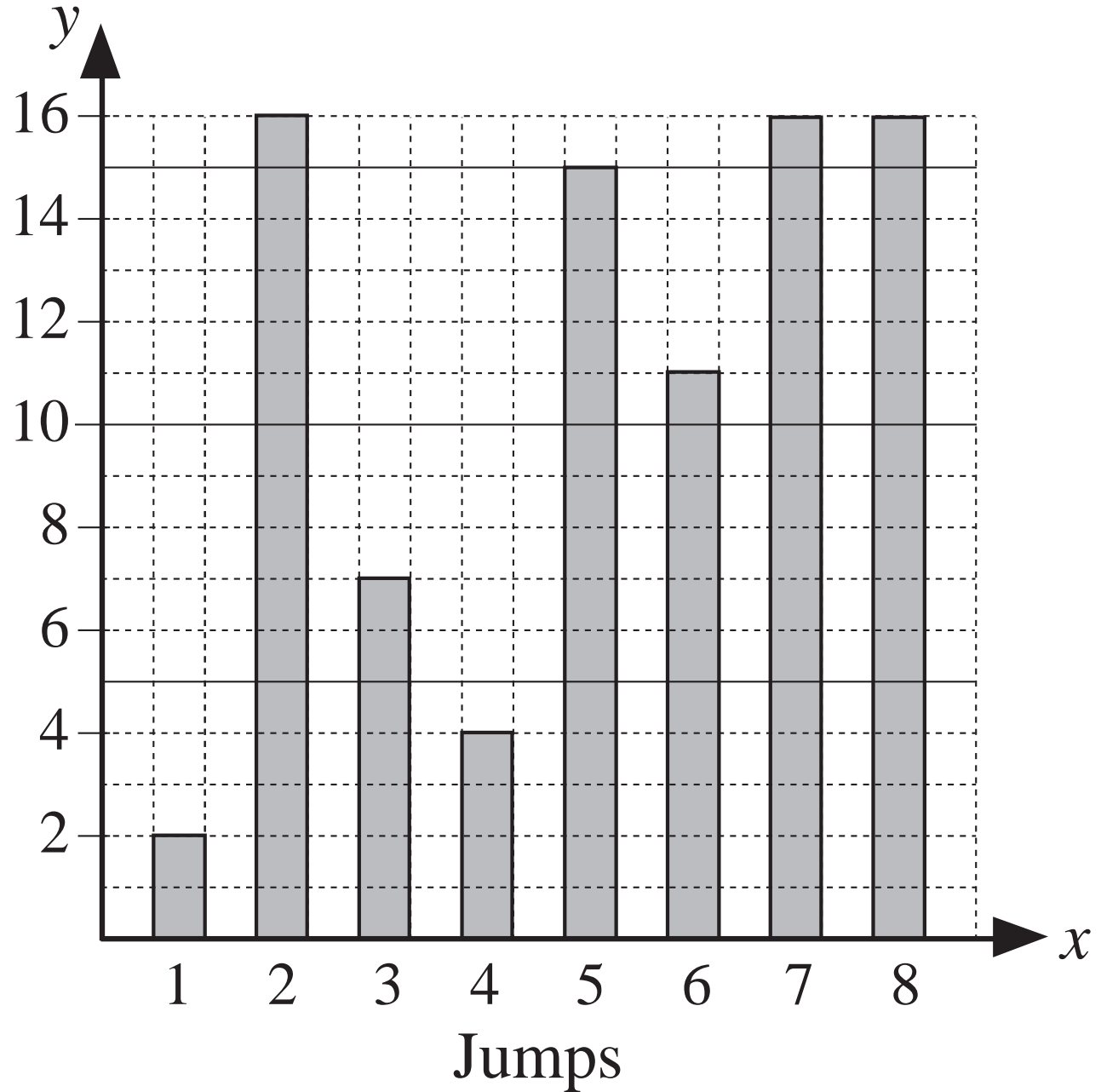
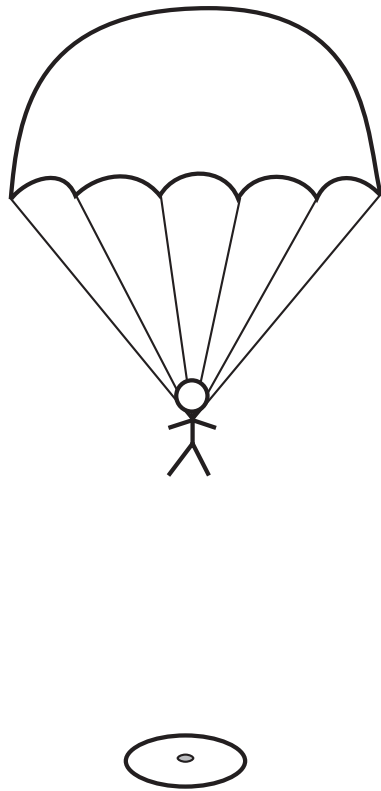



Year

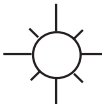
Year

Year

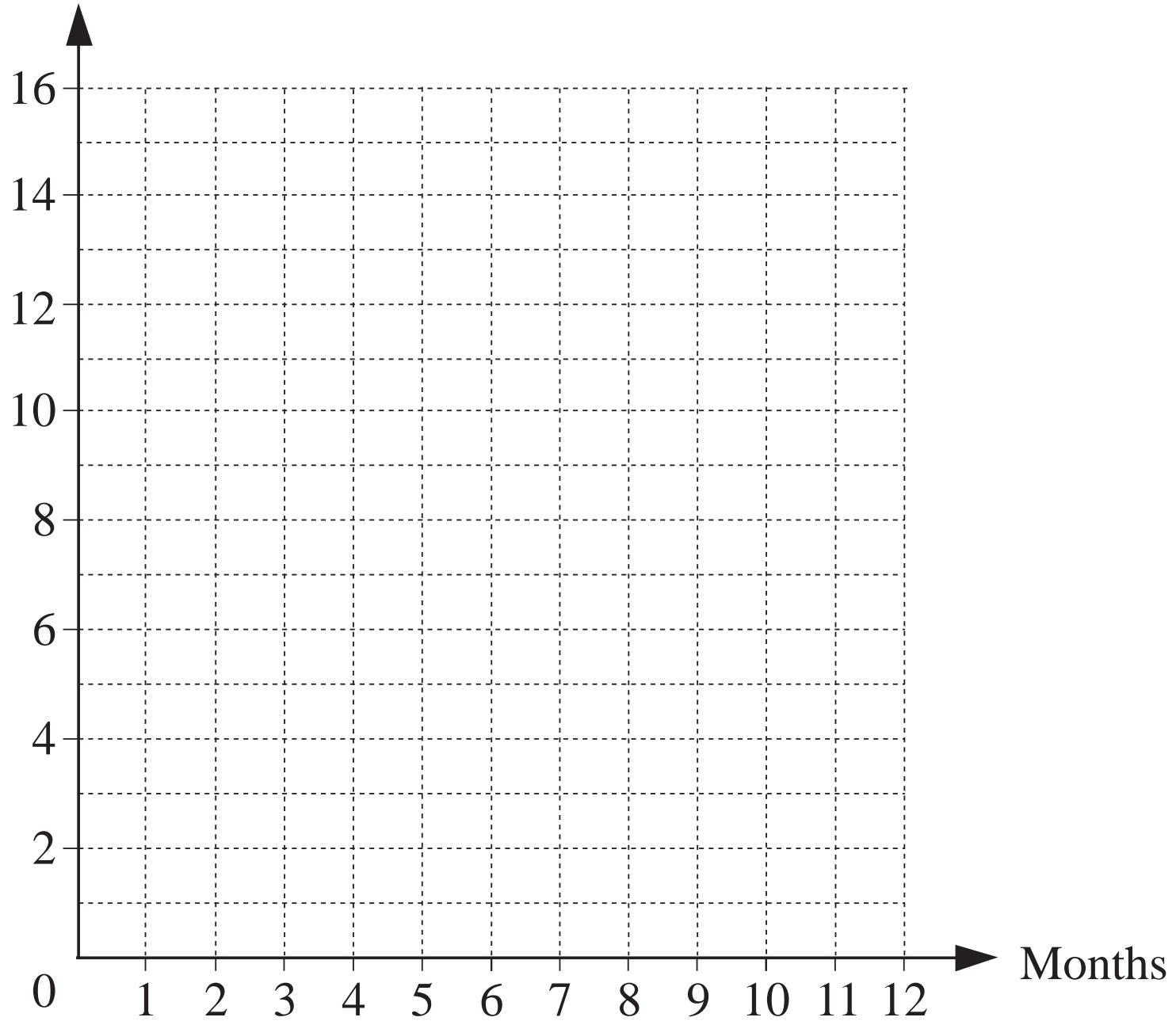
# Distance from centre of target (cm)



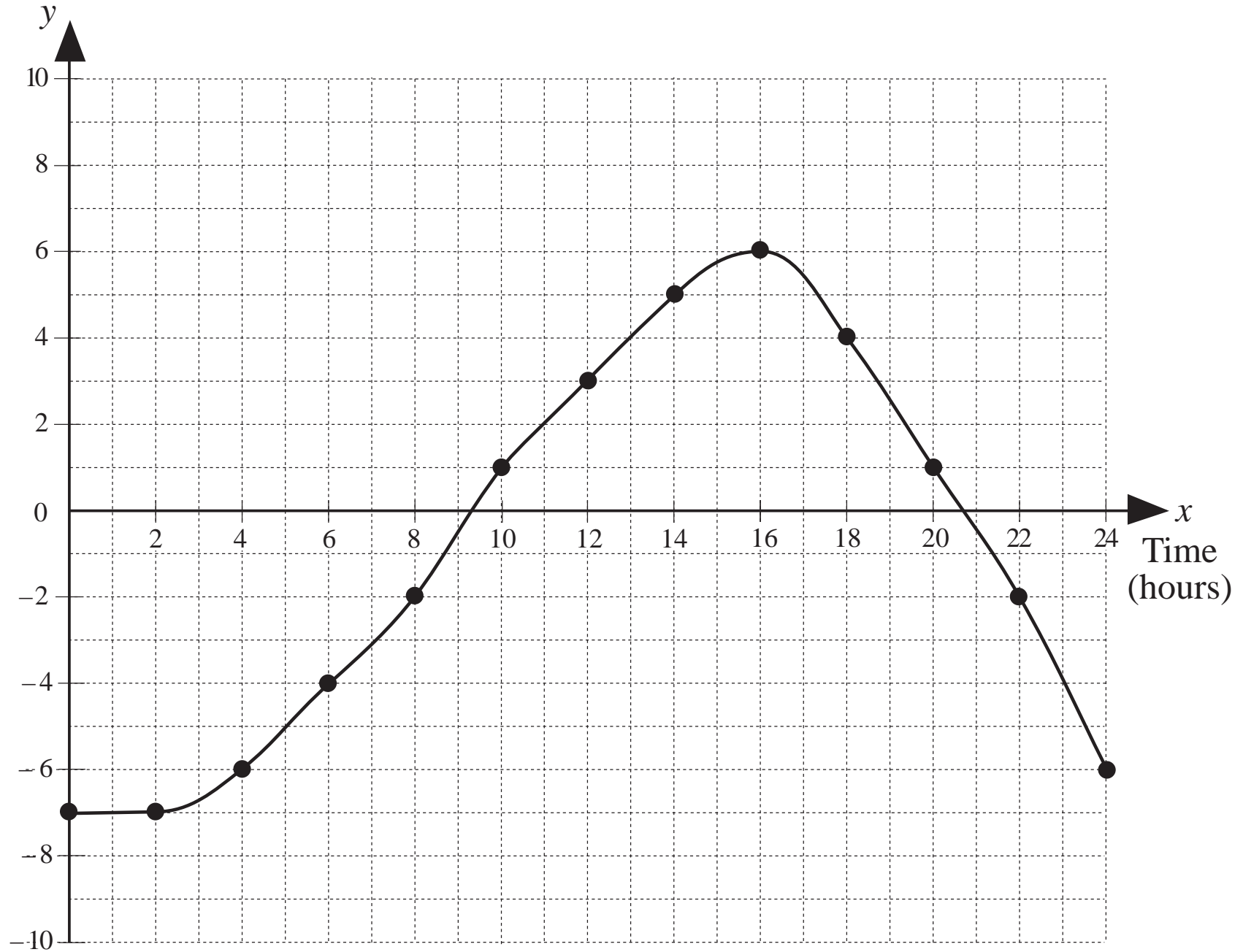
Date	21 Jan	21 Feb	21 Mar	21 Apr	21 May	21 Jun
Sunrise	07:23	06:41	05:46	04:45	04:02	03:46
Sunset	16:28	17:16	17:57	18.41	19:21	19:45
Day-time 						
Night-time 						

Date	21 Jul	21 Aug	21 Sep	21 Oct	21 Nov	21 Dec
Sunrise	04:08	04:47	05:29	06:10	06:57	07:29
Sunset	19:33	18:47	17:45	16:46	16:02	15:55
Day-time 						
Night-time 						

Hours

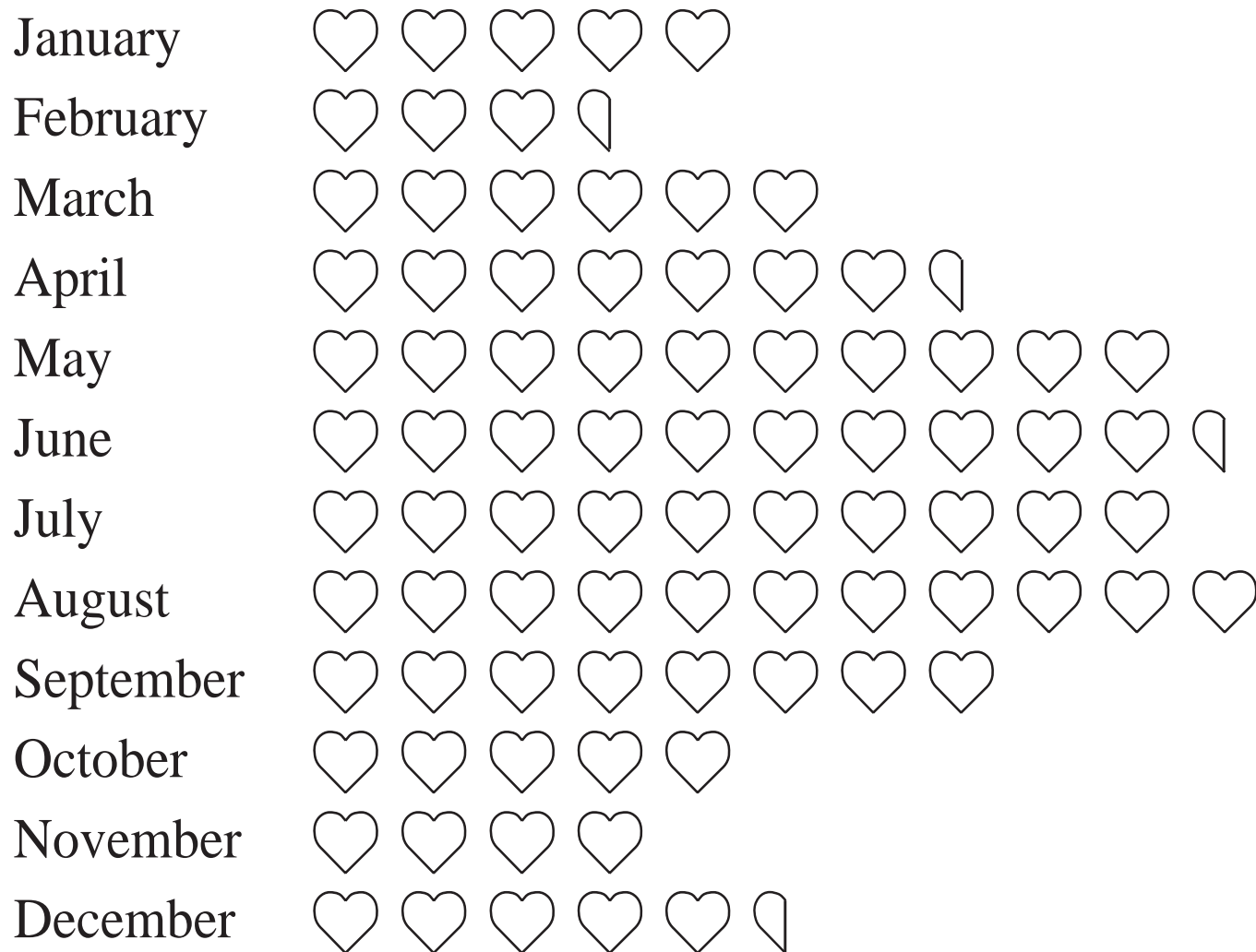


Temperature ( $^{\circ}\text{C}$ )

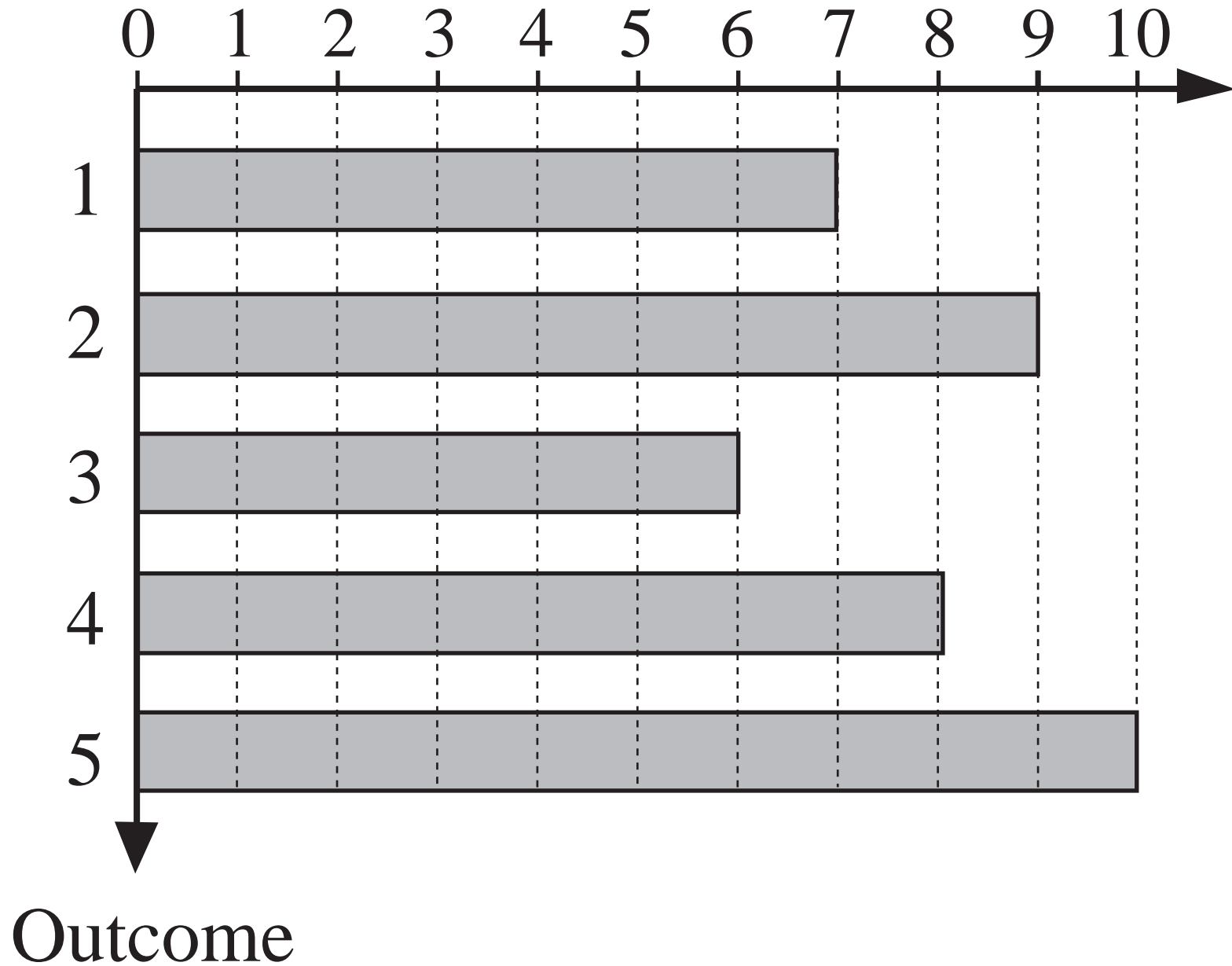


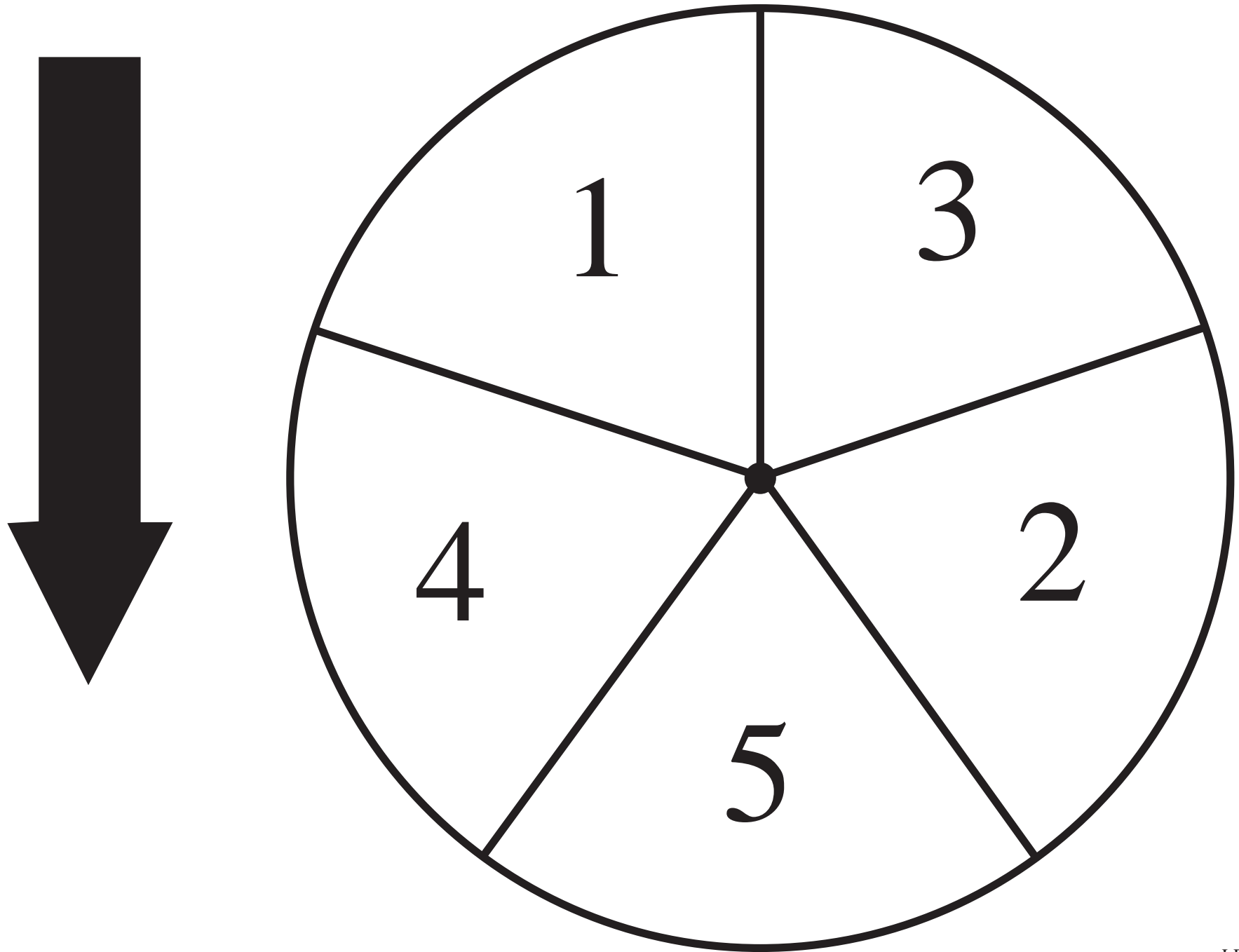


♥ = 500 weddings

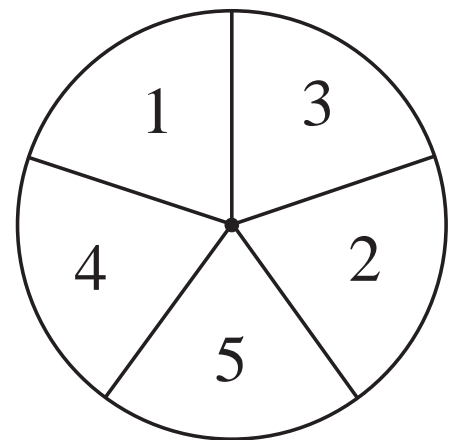
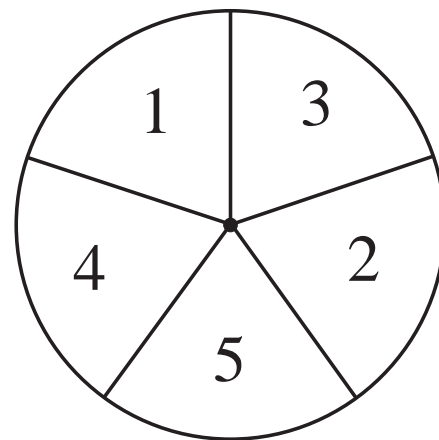
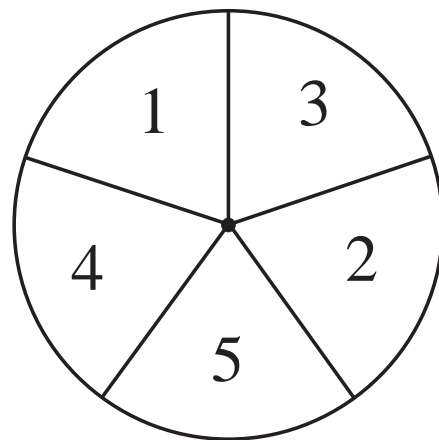
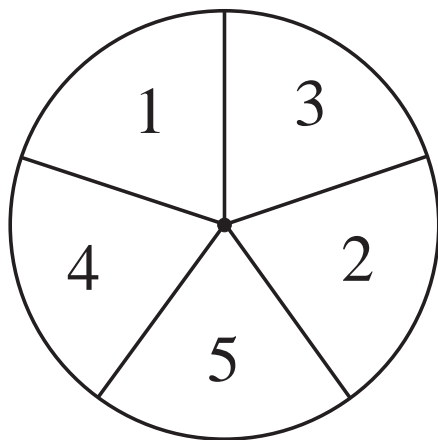
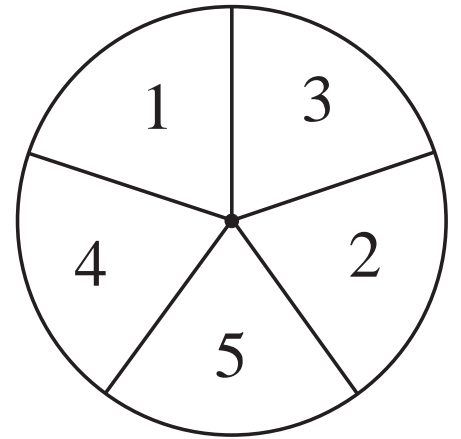
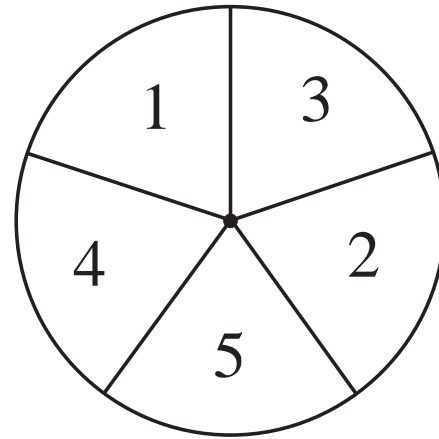
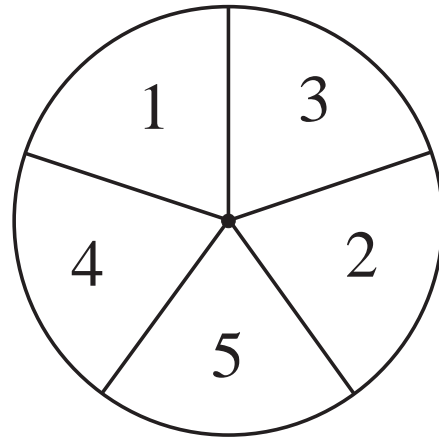
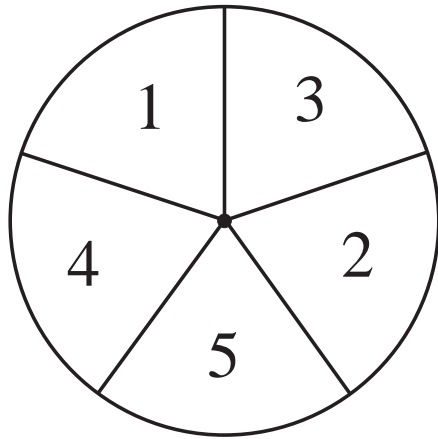
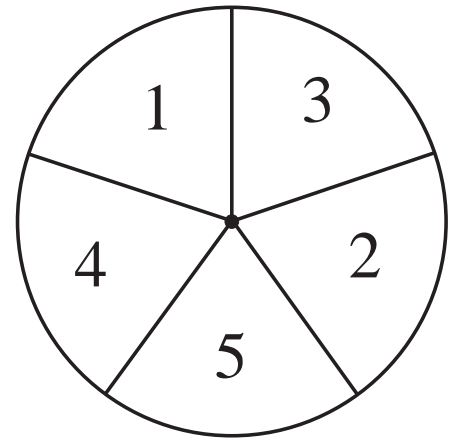
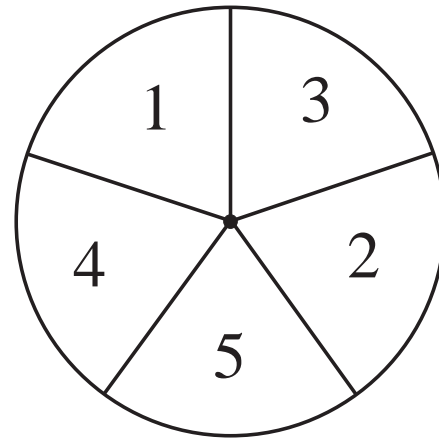
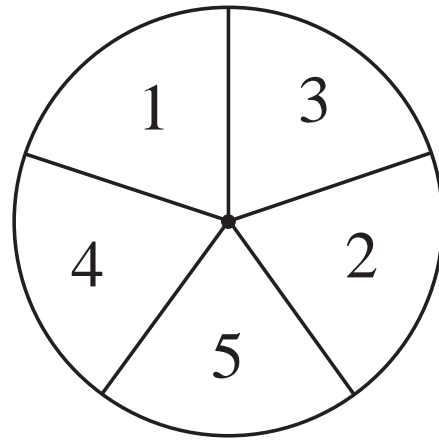
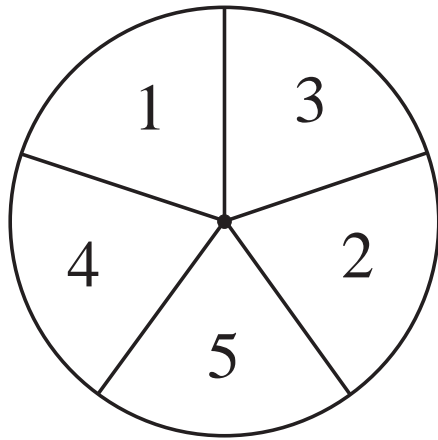


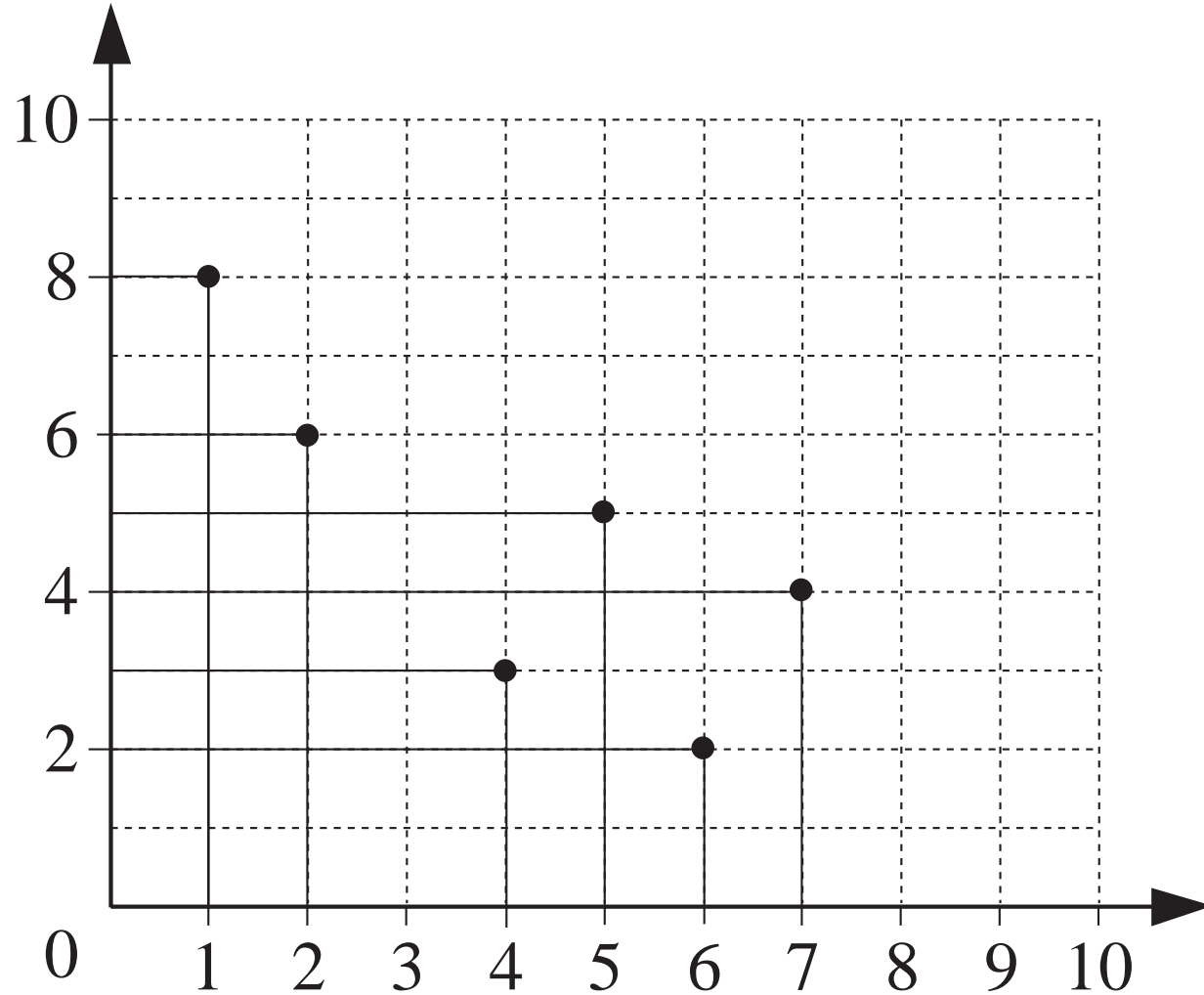

# Frequency





Copy on card, cut out and stick drawing pin through centre.



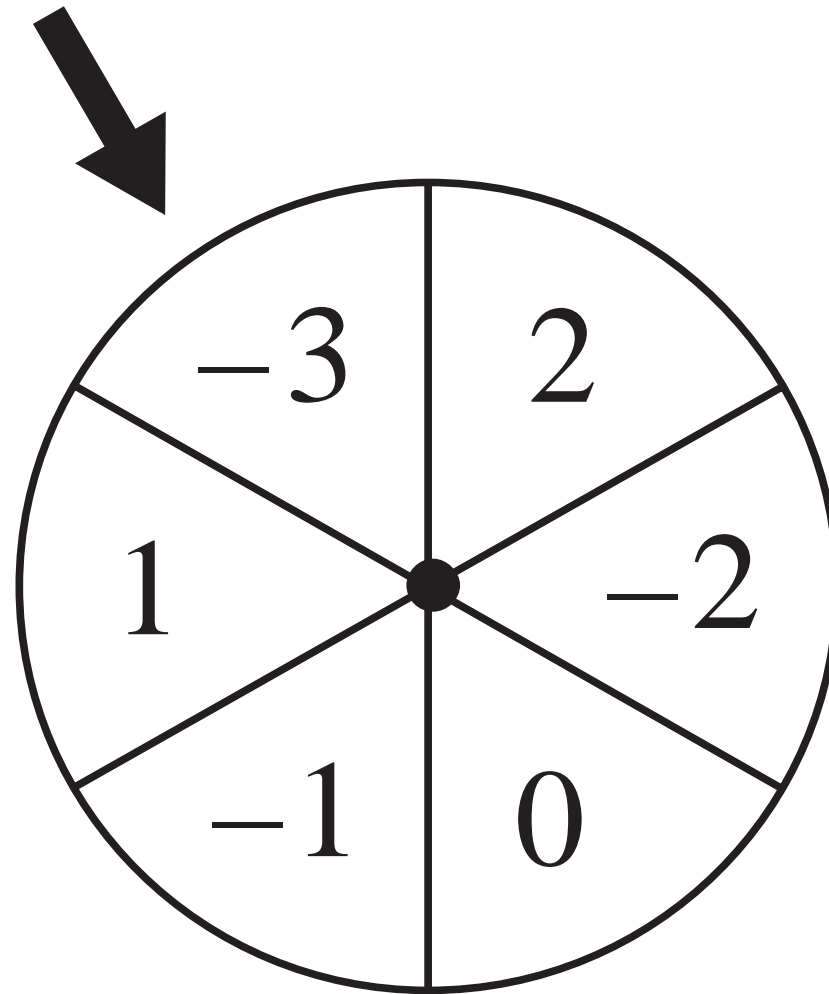


School code	01	02	03	04	05	06	07	08	09	10
School mean score	80	76	72	84	84	88	68	66	83	65
Number of pupils	78	84	34	66	82	76	19	6	12	20

LP 54/2

School code	A	B	C	D	E	F	G	H	I	J
School mean score	89	94	80	107	95	117	87	77	90	85
Number of pupils	58	75	32	70	93	75	34	9	10	18

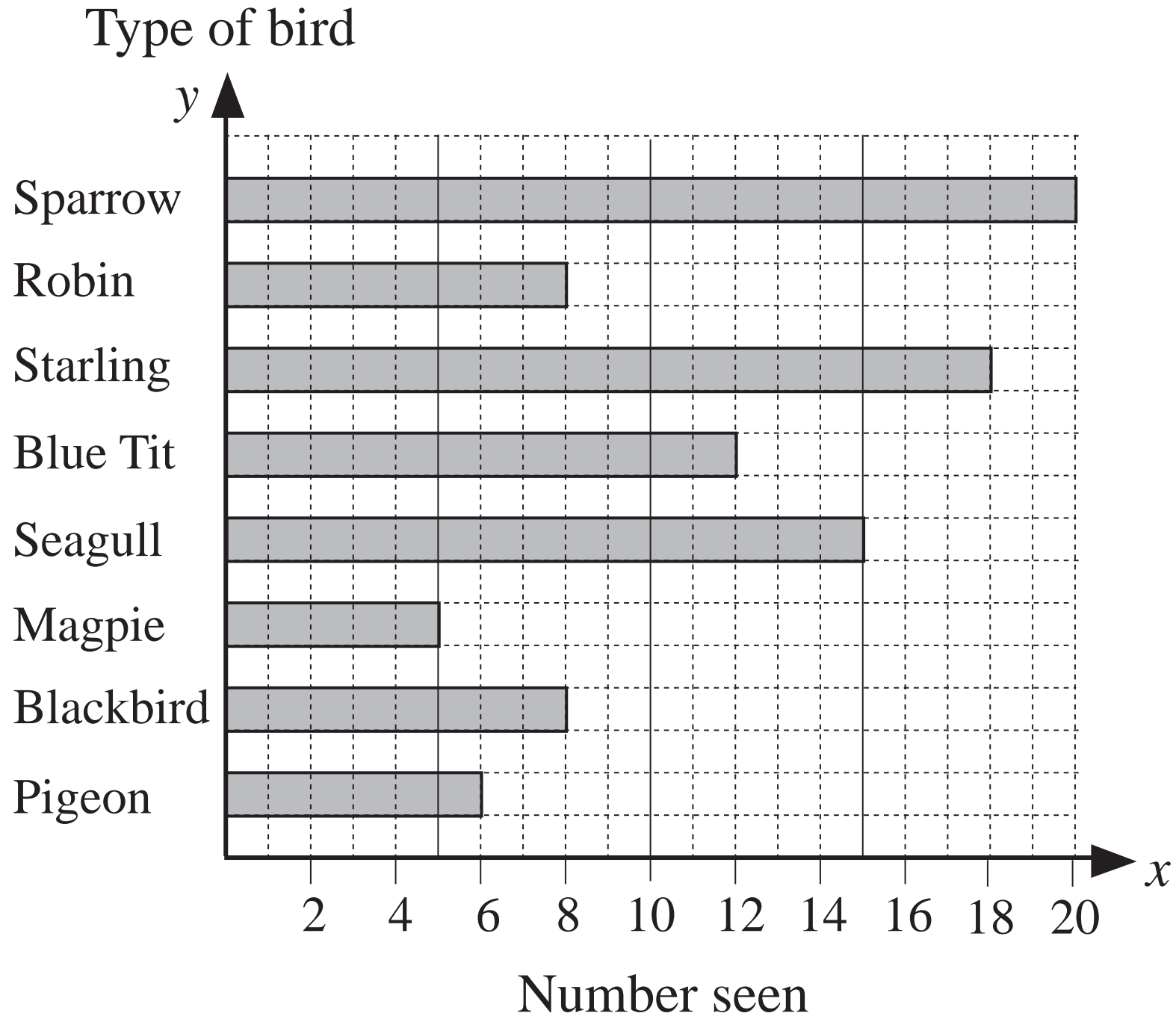
LP 54/3



0, 2,  $-3$ ,  $-1$ , 2, 1,  $-2$ , 0,  $-2$ , 0, 2,  
2,  $-3$ ,  $-1$ , 1, 2, 0,  $-3$ ,  $-2$ , 2, 1

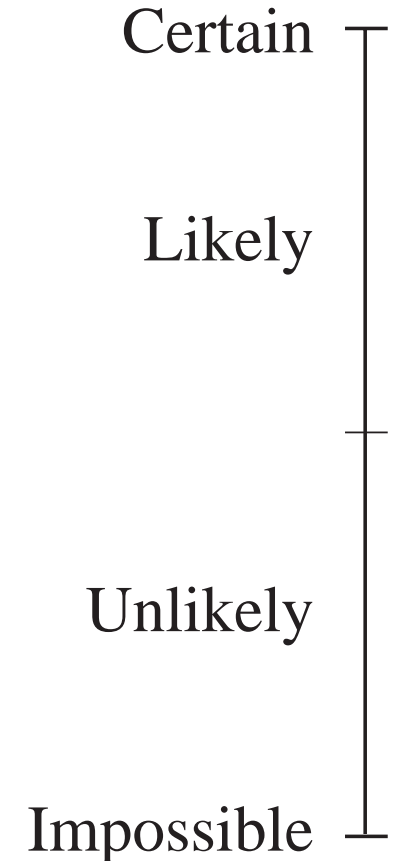
River level (cm)	265	183	95	- 36	- 110	- 280	- 196	- 72
Height above sea level (m)								



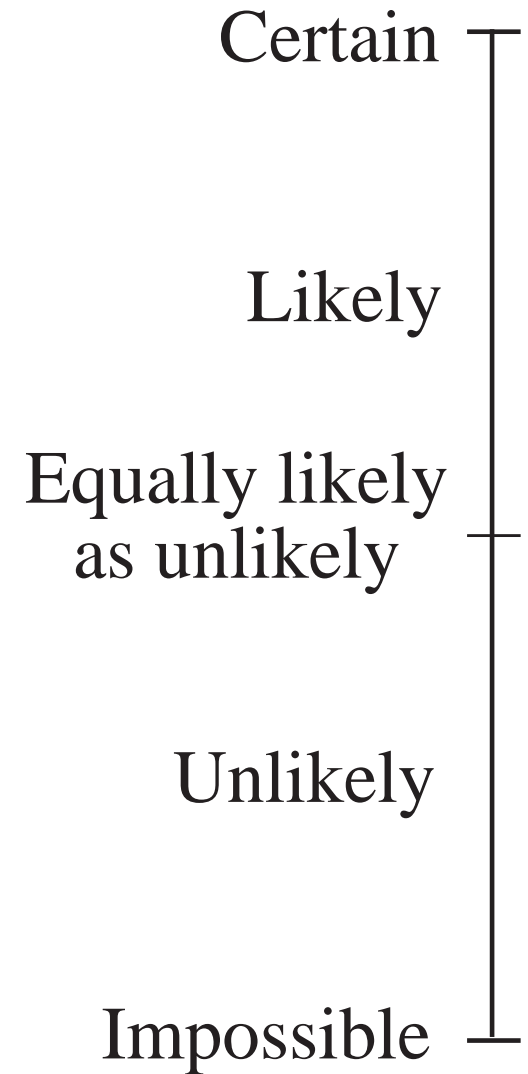




- a) The marble taken out is red.
- b) The marble taken out is green.
- c) The marble taken out is red and green.
- d) The marble taken out is not green.
- e) If you take out a marble, put it back again, then take out a second marble, both marbles will be red.
- f) The marble taken out is red or green.



- a) In the year 2012, there will be a 29th February.
- b) If a fair dice is thrown, it will land with 5.2 facing up.
- c) If a fair coin is flipped it will land with a tail facing up.
- d) If a fair coin is flipped it will not land with a tail facing up.
- e) If a fair dice is thrown, it will not land with an even number facing up.
- f) If we took 7 marbles from a bag of 6 red and 3 blue marbles, at least one of the 7 would be red.
- g) Next Year, twice as many girls as boys will be born.



- i) The first 5 children to get on board are Polish.
- ii) The last child to get on board is Polish or Hungarian or Scottish.
- iii) The first child to get on board is Scottish.
- iv) The first 4 children to get on board are Polish, Hungarian, Polish and Scottish in that order.
- v) The first child to get on board is Hungarian.

Certain

Likely

Equally likely  
as unlikely

Unlikely

Impossible

# Pupil data

**Outcome**

*Tally of 30 tosses*







**Total**

Head		
Tail		
		$n = 30$




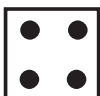


# Class data

<b>Outcome</b>	<b>Frequency</b>	<b>Relative Frequency</b>
Head		
Tail		
	$n =$	

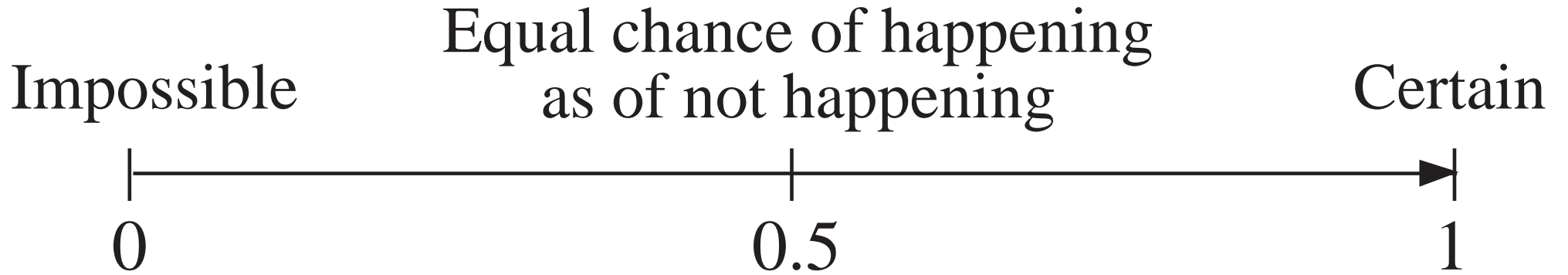
# Pupil Data

Outcome	Tally of 60 throws	Frequency	Relative Frequency
			
			
			
			
			
			
		$n = 60$	

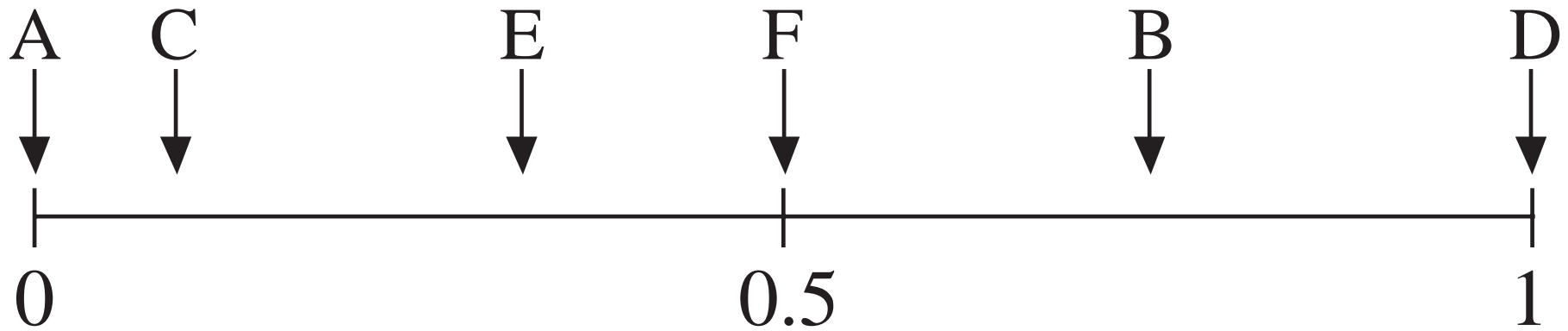
# Class Data

Outcome	Frequency	Relative Frequency
		
		
		
		
		
		
$n =$		

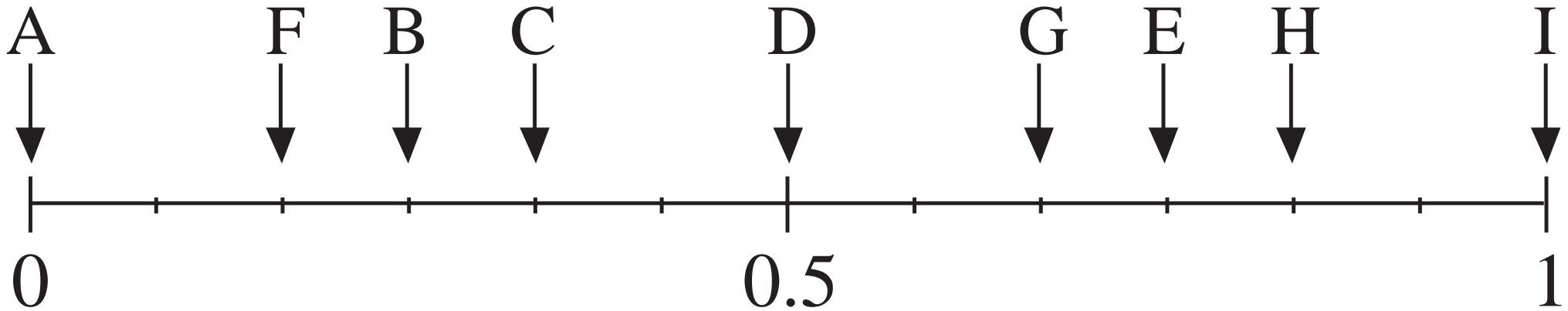




LP 57/5



LP 57/6



LP 58/2

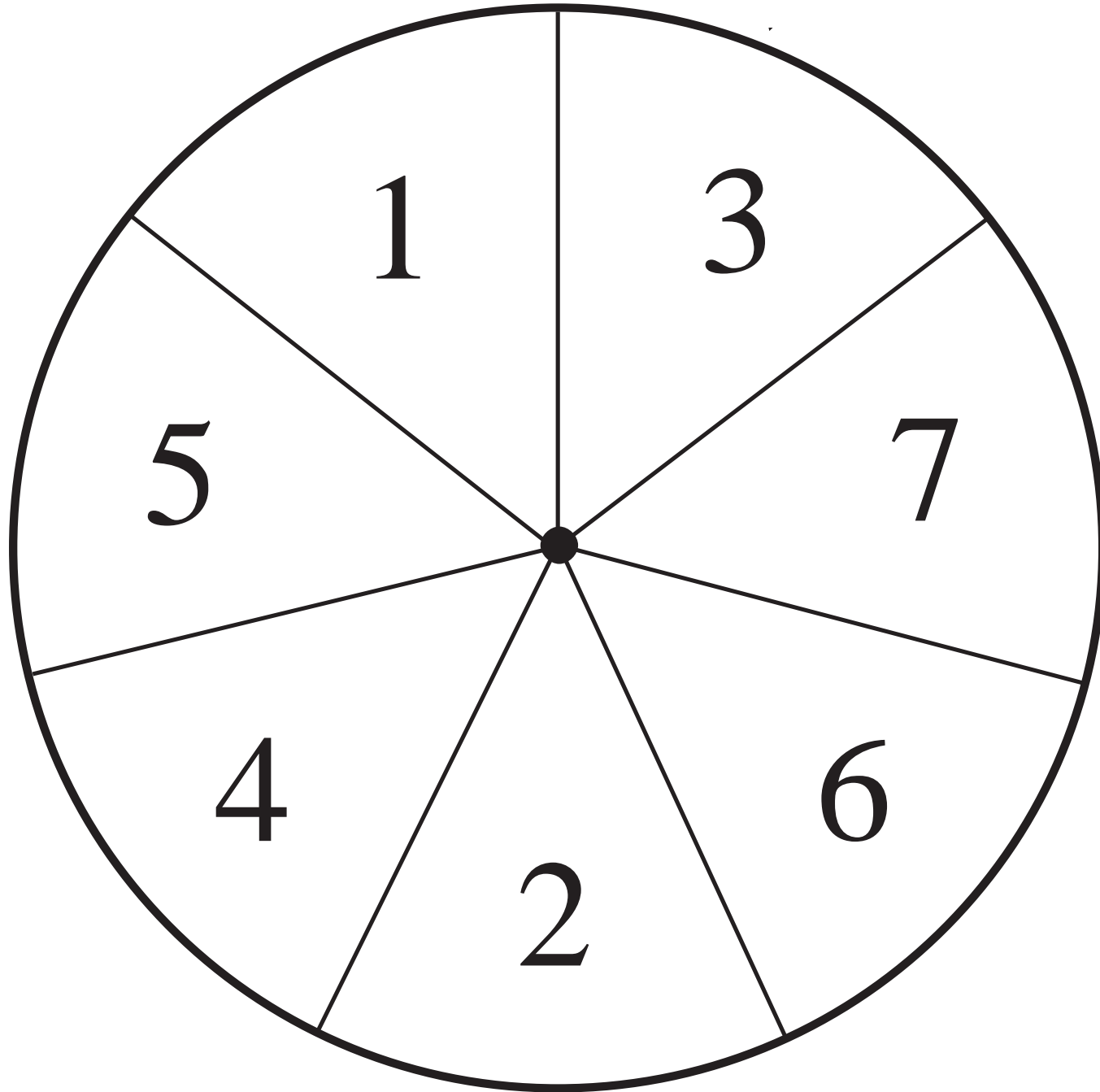
## Pupil data

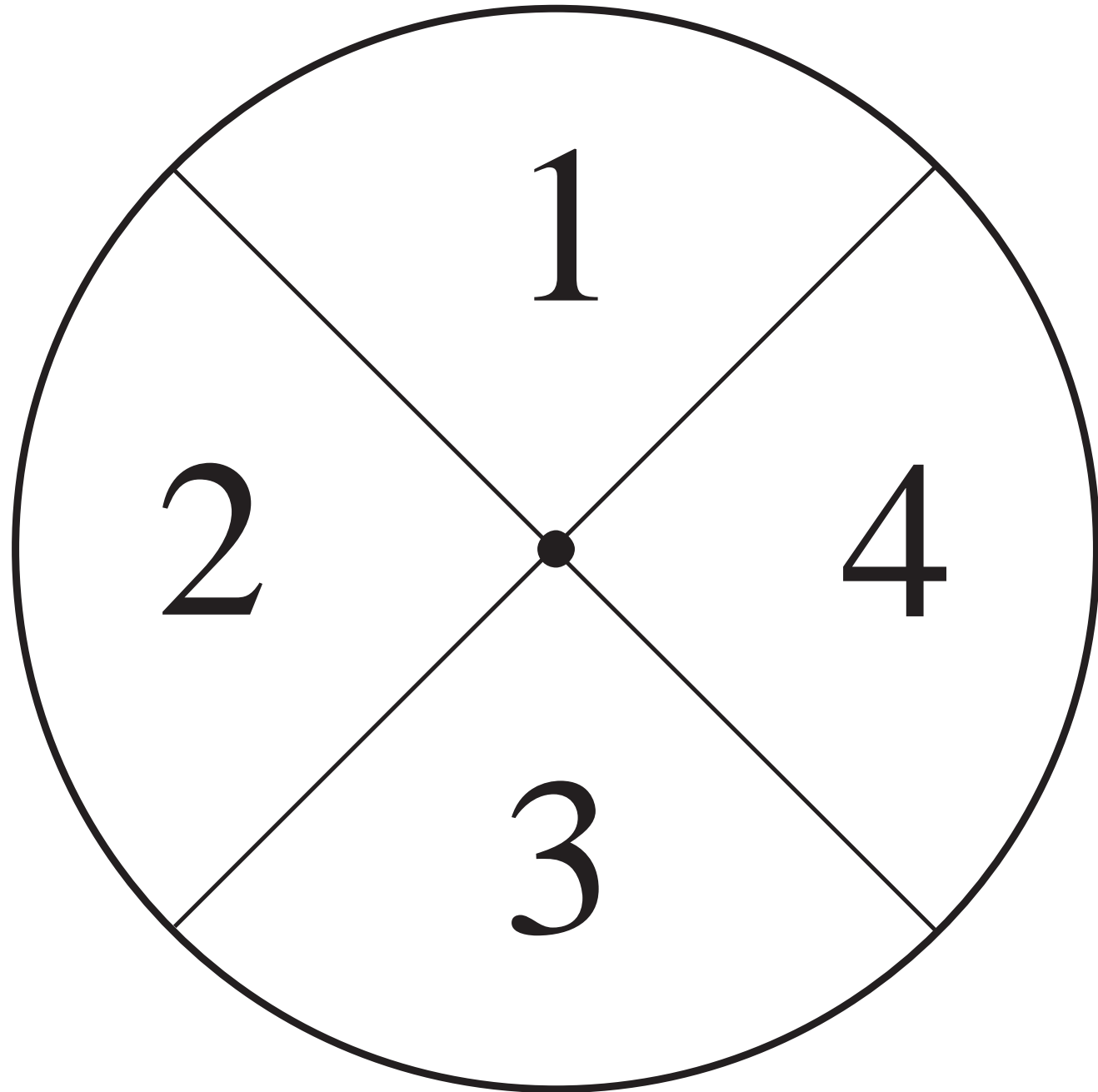
Outcome	Tally of 40 tosses	Frequency	Relative Frequency
2 Heads			
1H + 1T			
2 Tails			
		$n = 40$	

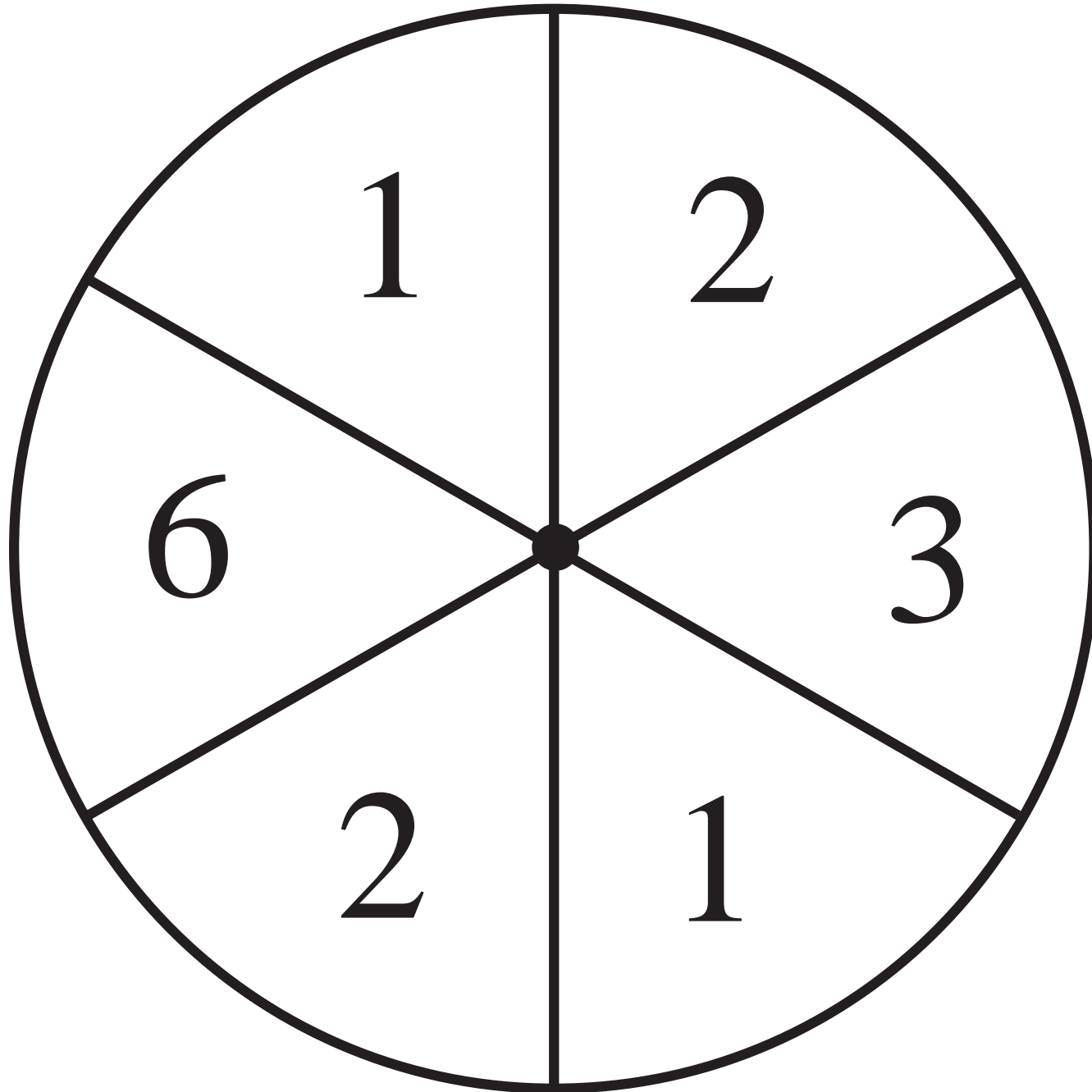
LP 58/4a


# Class data for tossing 2 coins

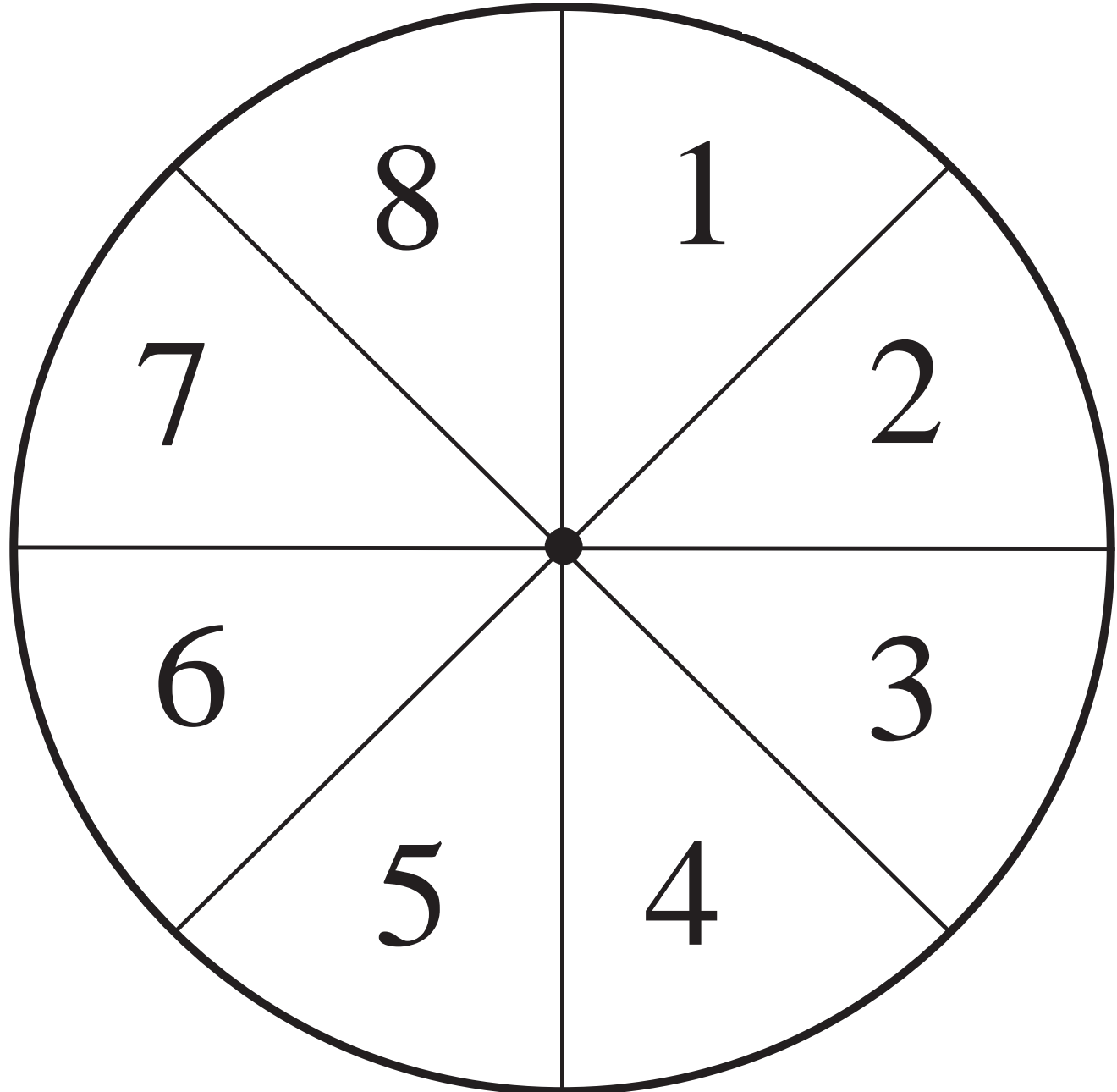
<b>Outcome</b>	<b>Frequency</b>	<b>Relative Frequency</b>
2 Heads		
1H + 1T		
2 Tails		
	$n =$	







- a) The marble taken out is *green*. Certain
- b) The marble taken out is *red*. Likely
- c) The marble taken out is either *red* **or** *yellow*. Equally likely as unlikely
- d) The marble taken out is **not** *yellow*. Unlikely
- e) The marble taken out is *black*. Impossible
- f) The marble taken out is **not** *black*.
- 





a)  $9 \times 2 =$

$9 \times 1 =$

$9 \times \frac{1}{2} =$

$9 \times \frac{1}{4} =$

$9 \times \frac{1}{8} =$

b)  $6 \times 3 =$

$6 \times 1 =$

$6 \times \frac{1}{3} =$

$6 \times \frac{2}{3} =$

$6 \times \frac{1}{6} =$

c) If  $a \times b = c$ , then

$a \times \frac{b}{2} =$

$a \times \frac{b}{3} =$

$a \times \frac{b}{4} =$

$a \times \frac{b}{5} =$

a)

$$25 \times 100 =$$

$$25 \times 10 =$$

$$25 \times 1 =$$

$$25 \times 0.1 =$$

$$25 \times 0.01 =$$

$$25 \times 0.001 =$$

b)

$$7 \times 2 =$$

$$7 \times 0.2 =$$

$$7 \times 0.6 =$$

$$7 \times 0.1 =$$

$$7 \times 0.05 =$$

c)

$$41 \times 0.3 =$$

$$15 \times 0.3 =$$

$$10 \times 0.3 =$$

$$5 \times 0.3 =$$

$$0 \times 0.3 =$$

a)  $7.6 \times 100 =$

$7.6 \times 10 =$

$7.6 \times 1 =$

$7.6 \times$    $= 0.76 = 7.6 \div$

$7.6 \times$    $= 0.076 = 7.6 \div$

b)  $0.5 \times 4 =$

$0.5 \times 2 =$

$0.5 \times 1 =$

$0.5 \times$    $= 0.25 = 0.5 \div$

$0.5 \times$    $= 0.125 = 0.5 \div$

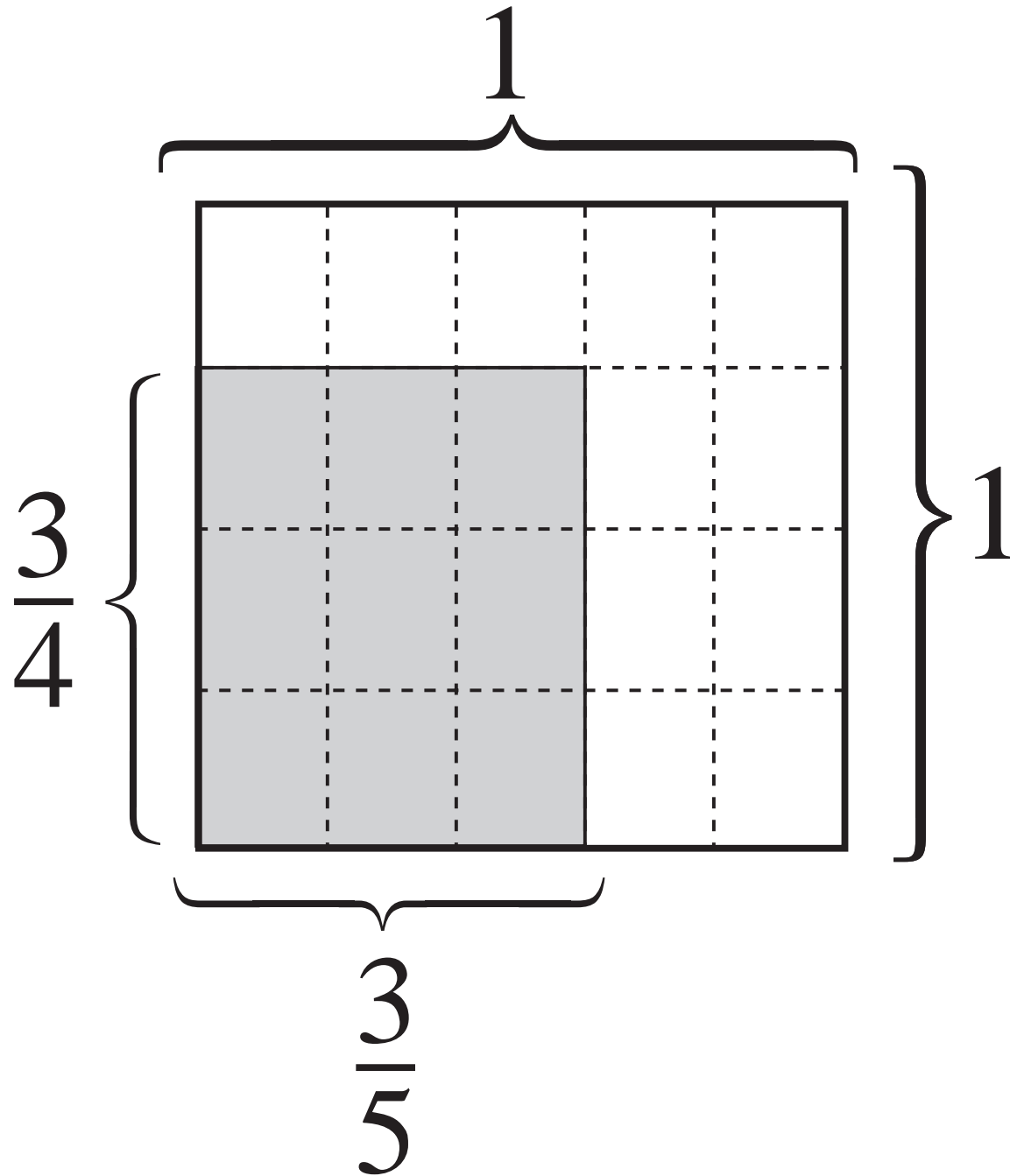
c)  $\frac{1}{2} \times 4 =$

$\frac{1}{2} \times 2 =$

$\frac{1}{2} \times 1 =$

$\frac{1}{2} \times$    $= \frac{1}{4} = \frac{1}{2} \div$

$\frac{1}{2} \times$    $= \frac{1}{8} = \frac{1}{2} \div$



a)

$$372 \times 100 =$$

$$372 \times 10 =$$

$$372 \times 1 =$$

$$372 \times 0.1 =$$

$$372 \times 0.01 =$$

$$372 \times 0.001 =$$

b)

$$9 \times 700 =$$

$$9 \times 70 =$$

$$9 \times 7 =$$

$$9 \times 0.7 =$$

$$9 \times 0.07 =$$

$$9 \times 0.007 =$$

c)

$$4.2 \times 50 =$$

$$4.2 \times 5 =$$

$$4.2 \times 0.5 =$$

$$4.2 \times 0.05 =$$

$$4.2 \times 0.005 =$$

$$0.42 \times 500 =$$

If 1 m of material costs £  $\frac{4}{5}$ , then:

a) 3 m  $\rightarrow$  .....

b)  $\frac{1}{2}$  m  $\rightarrow$  .....

c)  $\frac{3}{4}$  m  $\rightarrow$  .....

d)  $4\frac{2}{5}$  m  $\rightarrow$  .....

e) 3.6 m  $\rightarrow$  .....

a) i)  $\frac{2}{5} \times \frac{4}{7} =$

ii)  $\frac{2}{5} \times \frac{7}{4} =$

iii)  $\frac{5}{2} \times \frac{4}{7} =$

iv)  $\frac{5}{2} \times \frac{7}{4} =$

b) i)  $\frac{5}{42} \times \frac{7}{15} =$

ii)  $\frac{5}{42} \times \frac{15}{7} =$

iii)  $\frac{42}{5} \times \frac{7}{15} =$

iv)  $\frac{42}{5} \times \frac{15}{7} =$

c) i)  $\frac{3}{4} \times \frac{2}{6} \times \frac{8}{15} \times \frac{60}{80} =$

ii)  $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} =$

d) i)  $2\frac{4}{5} \times \frac{1}{2} =$

ii)  $\frac{11}{4} \times 2\frac{5}{20} =$

iii)  $2\frac{1}{3} \times 1\frac{2}{7} =$

If 1 cm<sup>3</sup> of pure gold weighs 19.32 g, then:

a) 4 cm<sup>3</sup> → .....

b) 15 cm<sup>3</sup> → .....

c) 0.1 cm<sup>3</sup> → .....

d) 0.7 cm<sup>3</sup> → .....

e) 1.6 cm<sup>3</sup> → .....

f) 72.1 cm<sup>3</sup> → .....

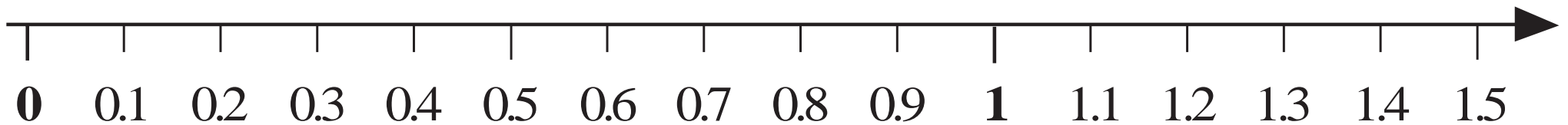


$a$	10	-10	3	1	5	-8	$1\frac{1}{4}$			0		-4
$b$	4	-4	$\frac{6}{5}$	0.4				-2	0.6		$\frac{8}{10}$	

*Rule:*  $a =$

$b =$

LP 67/7



LP 68/2

$$\text{a) } \frac{1}{100} = 0.01 \rightarrow 1\%$$

$$\text{b) } \frac{125}{100} = \boxed{\phantom{000}} \rightarrow \boxed{\phantom{000}}$$

$$\text{c) } \frac{8}{100} = \boxed{\phantom{000}} \rightarrow \boxed{\phantom{000}}$$

$$\text{d) } \frac{2}{100} = \boxed{\phantom{000}} \rightarrow \boxed{\phantom{000}}$$

$$\text{e) } \frac{67}{100} = \boxed{\phantom{000}} \rightarrow \boxed{\phantom{000}}$$

$$\text{f) } \frac{100}{100} = \boxed{\phantom{000}} \rightarrow \boxed{\phantom{000}}$$

$$\text{a) } 0.68 = \frac{68}{100} \rightarrow 68\%$$

$$\text{b) } 0.05 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{0000}}$$

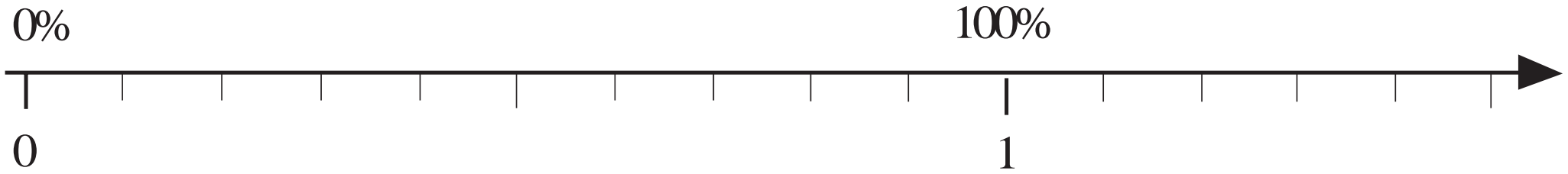
$$\text{c) } 0.01 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{0000}}$$

$$\text{d) } 0.11 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{0000}}$$

$$\text{e) } 2.42 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{0000}}$$

$$\text{f) } 1.03 = \boxed{\phantom{00}} \rightarrow \boxed{\phantom{0000}}$$

- a) 47% →  =
- b) 71% →  =
- c) 6% →  =
- d) 0% →  =
- e) 193% →  =
- f) 50% →  =



LP 69/2

Base unit: 5 m	100%	1%	10%	30%	60%	80%	120%
In mm							
In cm							
In m	5						

LP 69/5

a)  $8\% \rightarrow \frac{8}{100} = \frac{2}{25} = 0.08$

b)  $3\% \rightarrow$

c)  $15\% \rightarrow$

d)  $50\% \rightarrow$

e)  $25\% \rightarrow$

f)  $80\% \rightarrow$

g)  $75\% \rightarrow$

h)  $150\% \rightarrow$

i)  $33\frac{1}{3}\% \rightarrow$

j)  $16.\dot{6}\% \rightarrow$

a)  $\frac{1}{5} = 0.2 \rightarrow 20\%$

b)  $\frac{3}{5} =$

c)  $\frac{1}{2} =$

d)  $\frac{3}{2} =$

e)  $\frac{1}{8} =$

f)  $\frac{5}{8} =$

g)  $\frac{7}{10} =$

h)  $\frac{6}{10} =$

i)  $\frac{1}{20} =$

j)  $\frac{15}{20} =$

k)  $\frac{1}{3} =$

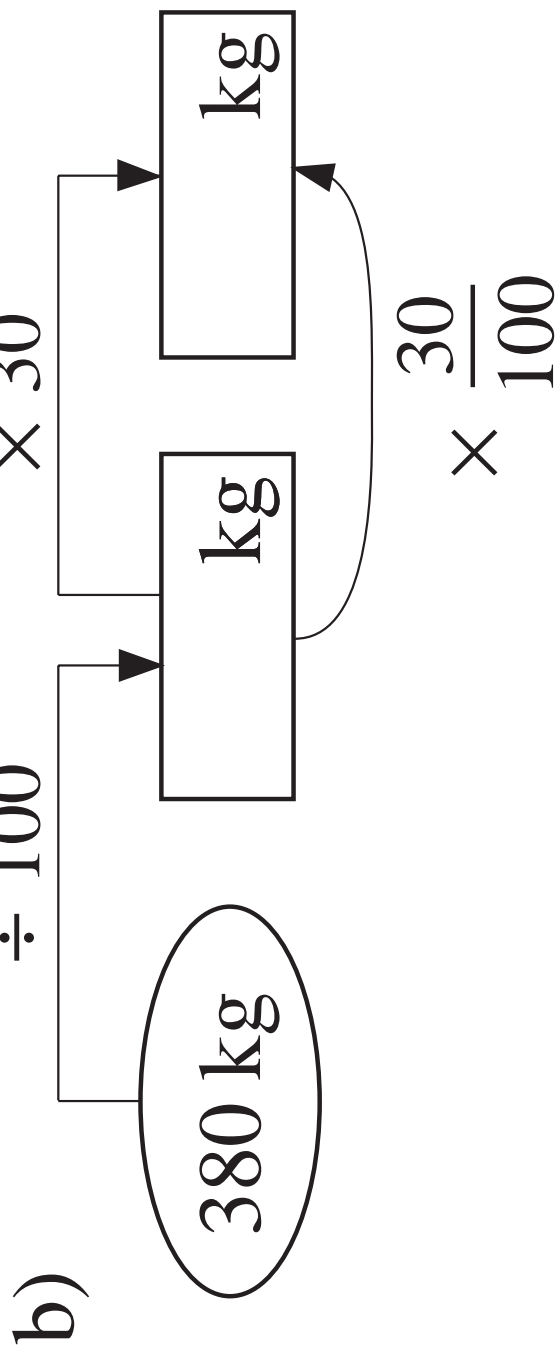
l)  $\frac{2}{3} =$

a)

$$100\% = \frac{100}{100} \quad \longrightarrow \quad 380 \text{ km}$$

$$1\% = \frac{1}{100} \quad \longrightarrow \quad \boxed{\phantom{00}} \text{ km}$$

$$30\% = \frac{30}{100} \quad \longrightarrow \quad \boxed{\phantom{00}} \text{ km}$$



c)  $380 \text{ litres} \times 0.3$



$x$	9	$-1\frac{1}{2}$	-9	3	-6			1	12		8	
$y$	-6	1	6			-10	10			16		$-\frac{20}{3}$

*Rule:*  $x =$

$y =$

a) i)  $\frac{3}{4} \times \frac{2}{9} =$

ii)  $\frac{3}{4} \times \frac{9}{2} =$

iii)  $\frac{4}{3} \times \frac{2}{9} =$

iv)  $\frac{4}{3} \times \frac{9}{2} =$

b) i)  $\frac{4}{15} \times \frac{12}{5} =$

ii)  $\frac{15}{4} \times \frac{12}{5} =$

iii)  $\frac{4}{15} \times \frac{5}{12} =$

iv)  $\frac{15}{4} \times \frac{5}{12} =$

c) i)  $\frac{1}{3} \times \frac{3}{5} \times \frac{5}{7} \times \frac{7}{9} =$

ii)  $\frac{1}{2} \times \frac{4}{8} \times \frac{8}{16} \times \frac{32}{64} \times \frac{128}{256}$   
 $=$

a)  $32 \div 4 =$

$32 \div 2 =$

$32 \div 1 =$

$32 \div \frac{1}{2} =$

$32 \div \frac{1}{4} =$

b)  $36 \div 9 =$

$36 \div 3 =$

$36 \div 1 =$

$36 \div \frac{1}{3} =$

$36 \div \frac{1}{9} =$

c)  $\frac{4}{5} \div 4 =$

$\frac{4}{5} \div 2 =$

$\frac{4}{5} \div 1 =$

$\frac{4}{5} \div \frac{1}{2} =$

$\frac{4}{5} \div \frac{1}{4} =$

a) i)  $3 \div \frac{1}{2} =$

ii)  $5 \div \frac{1}{3} =$

iii)  $10 \div \frac{1}{5} =$

b) i)  $4 \div \frac{2}{3} =$

ii)  $9 \div \frac{3}{2} =$

iii)  $5 \div \frac{5}{8} =$

c) i)  $\frac{4}{9} \div \frac{2}{9} =$

ii)  $\frac{4}{9} \div \frac{2}{3} =$

iii)  $\frac{6}{14} \div \frac{2}{7} =$

d) i)  $\frac{2}{5} \div \frac{1}{2} =$

ii)  $\frac{3}{4} \div \frac{2}{3} =$

iii)  $\frac{8}{10} \div \frac{3}{10} =$

a)  $45 \div 100 =$

b)  $2.4 \div 4 =$

$45 \div 10 =$

$2.4 \div 2 =$

$45 \div 1 =$

$2.4 \div 1 =$

$45 \div 0.1 =$

$2.4 \div 0.5 =$

$45 \div 0.01 =$

$2.4 \div 0.25 =$

a)

$a$	6	2	10	5			1		0			1.2
$b$	3.6	$1\frac{1}{5}$	6		12	-9		-1		2.4	0.3	

 $b =$ 
 $a =$ 

b)

$x$	8.4	6.3	3.15	4.41	10.5			-42	0	
$y$	4	3	1.5			15	4.5			0.3

 $y =$ 
 $x =$

a) i)  $63 \div \square = 9$

ii)  $\square \div 7 = 0.9$

iii)  $\square \div 70 = 0.9$

b) i)  $\square \div 7 = 5$

ii)  $\square \div 7 = 0.5$

iii)  $\square \div 70 = 5$

c) i)  $\square \div 4 = 250$

ii)  $\square \div 4 = 2.5$

iii)  $100 \div \square = 250$

d) i)  $\square \times 30 = 540$

ii)  $\square \times 0.3 = 54$

iii)  $\square \times 30 = 5.4$

a)

		1	7	.	8
	×	3	2		

b)

		7	0	.	2
	×	2	.	1	5

c)

		5	0	.	2
	×	0	.	2	5



a)  $57.2 \div 3.2$

b)  $71.34 \div 6.3$

c)  $5.6 \div 0.06$

3	2		5	7	2						



a)  $40 \div 4 =$

$40 \div 2 =$

$40 \div 1 =$

$40 \div \frac{1}{2} =$

$40 \div \frac{1}{4} =$

b)  $45 \div 9 =$

$45 \div 3 =$

$45 \div 1 =$

$45 \div \frac{1}{3} =$

$45 \div \frac{1}{9} =$

c)  $\frac{3}{5} \div 9 =$

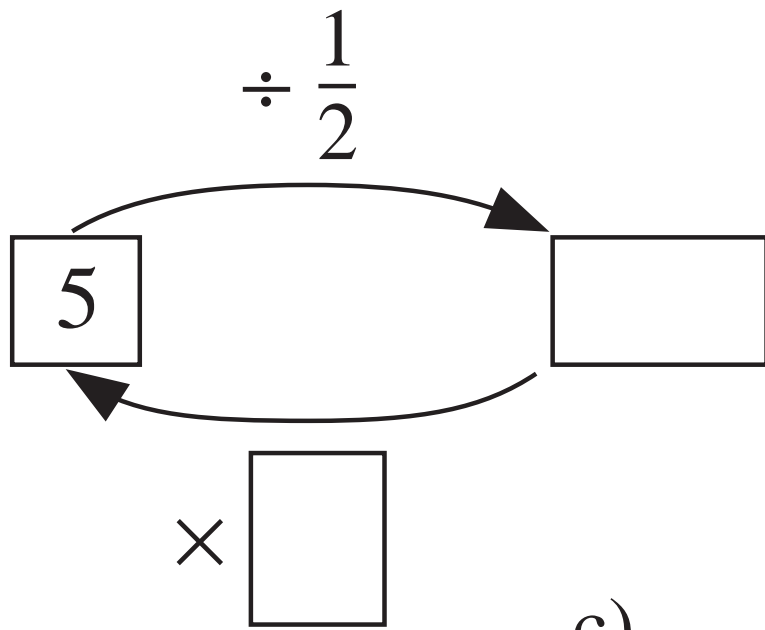
$\frac{3}{5} \div 3 =$

$\frac{3}{5} \div 1 =$

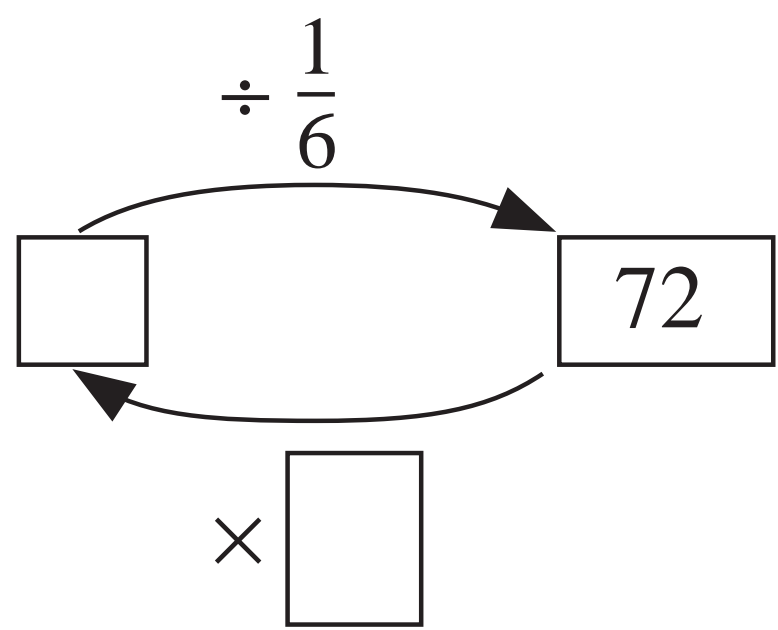
$\frac{3}{5} \div \frac{1}{3} =$

$\frac{3}{5} \div \frac{1}{3} =$

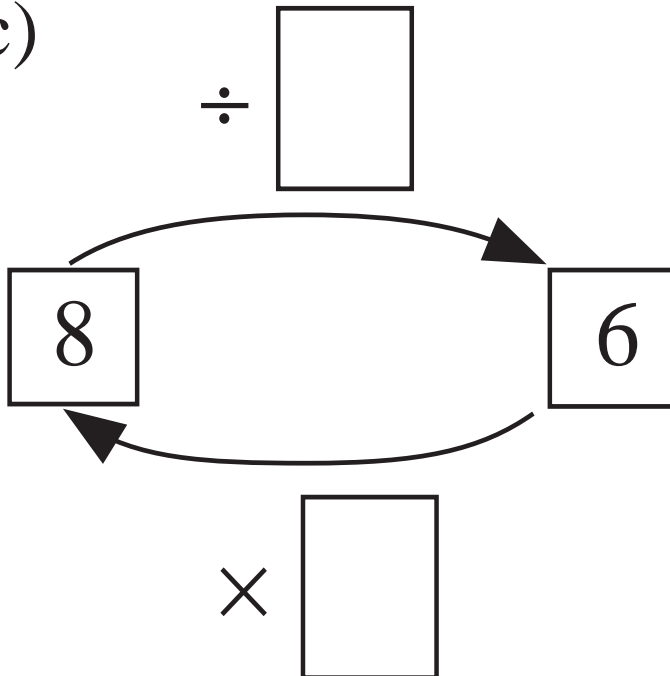
a)

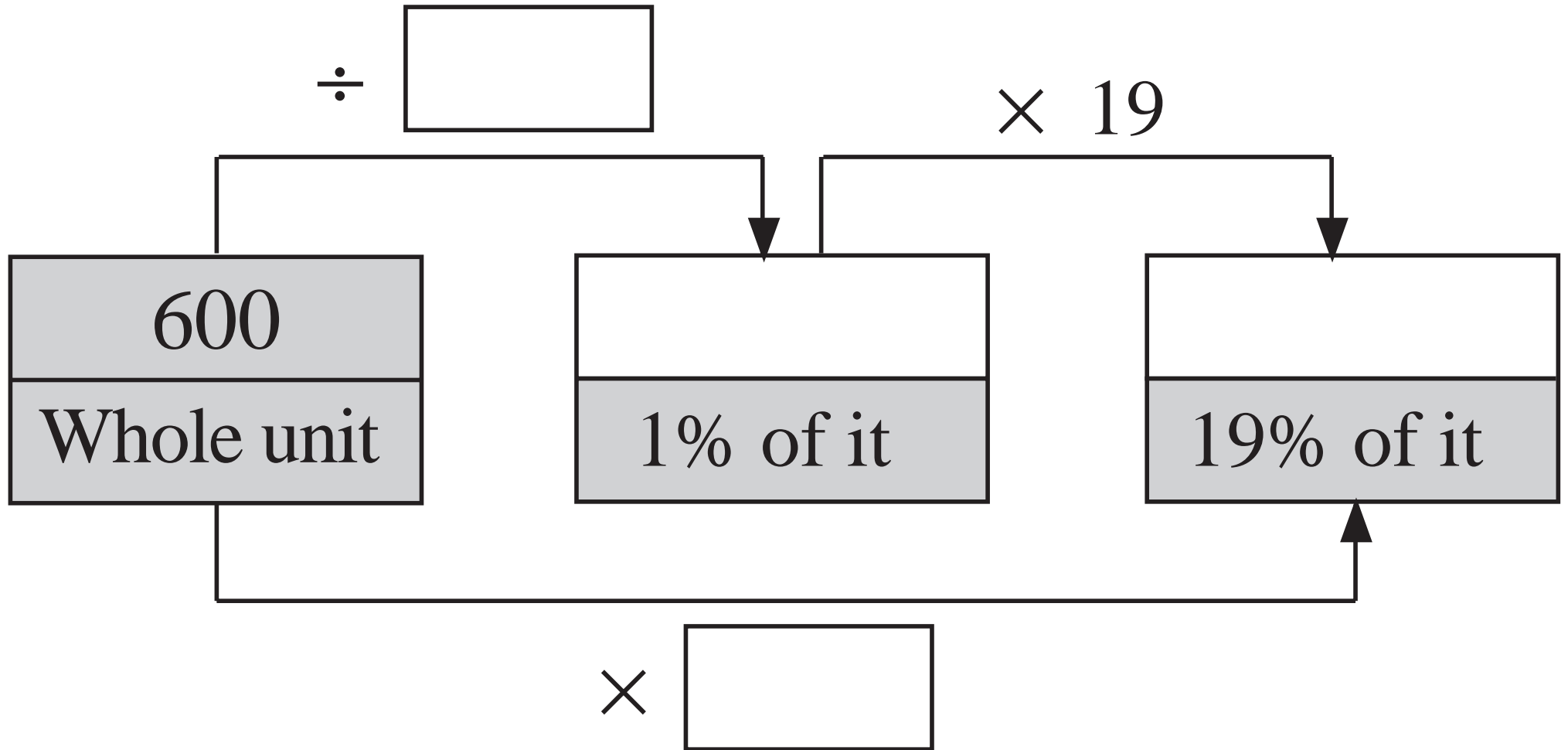


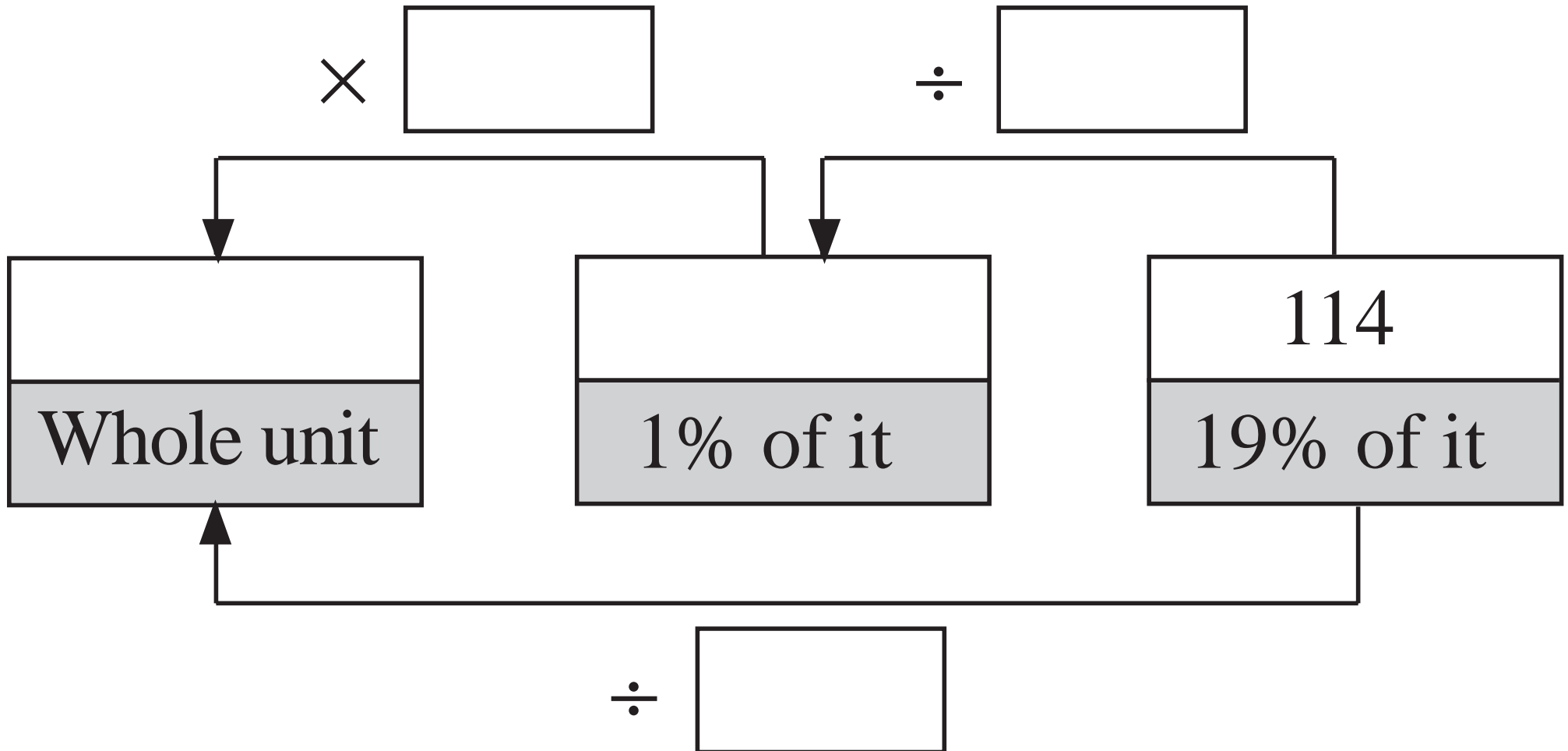
b)



c)







160 kg	1%	5%	10%	25%	50%	75%	100%	125%
in kg							160	
in g								

LP 77/3

<b>0.5 km</b>	1%	5%	10%	25%	50%	75%	100%	125%	90%
in km							0.5		
in m									

LP 77/4

Angle	1%	5%	10%	25%	50%	70%	90%	100%	150%
Right									
Straight									
Whole									

LP 77/5

If 3.5 m is:	1%	2%	4%	5%	10%	20%	25%	50%	100%	150%
the whole length is:	350 m									

LP 77/6

# Key

£ = GBP (British Pound), € = Euro, \$ = USD (Dollar),  
 JPY = Japanese Yen, CHF = Swiss Franc, SEK = Swedish Krona

$$\text{£1} = 1.429 \text{ €} \quad 1\$ = \text{£} \underline{\hspace{2cm}} \quad 1 \text{ JPY} = \text{£} \underline{\hspace{2cm}}$$

$$\text{£1} = 1.567 \$ \quad 1\$ = \underline{\hspace{2cm}} \text{ €} \quad 1 \text{ JPY} = \underline{\hspace{2cm}} \text{ €}$$

$$\text{£1} = 2.196 \text{ CHF} \quad 1\$ = \underline{\hspace{2cm}} \text{ CHF} \quad 1 \text{ JPY} = \underline{\hspace{2cm}} \$$$

$$\text{£1} = 13.111 \text{ SEK} \quad 1\$ = \underline{\hspace{2cm}} \text{ SEK} \quad 1 \text{ JPY} = \underline{\hspace{2cm}} \text{ CHF}$$

$$\text{£1} = 182.695 \text{ JPY} \quad 1\$ = \underline{\hspace{2cm}} \text{ JPY} \quad 1 \text{ JPY} = \underline{\hspace{2cm}} \text{ SEK}$$



a)  $2 \times \frac{3}{4}$    $\frac{2}{3} + \frac{3}{4}$

b)  $\frac{1}{2} - \frac{1}{3}$    $1 - \frac{5}{6}$

c)  $6 - \frac{1}{6}$   5.6

d)  $0.8 + (0.45 - 0.5)$    $0.8 + 0.45 - 0.5$

e)  $2 - (1.1 - 0.2)$    $2 - 1.1 - 0.2$

f)  $12 \times 0.6$    $12 \times \frac{2}{3}$

g) 6% of £500  5% of £600

a) i)  $\frac{5}{9} + \frac{2}{9} =$

ii)  $\frac{8}{15} - \frac{3}{15} =$

iii)  $4\frac{3}{7} + 2\frac{5}{7} =$

iv)  $3\frac{2}{11} - 1\frac{5}{11} =$

b) i)  $\frac{3}{4} + \frac{2}{3} =$

ii)  $\frac{5}{6} - \frac{3}{4} =$

iii)  $2\frac{7}{9} + 3\frac{1}{2} =$

iv)  $4\frac{3}{8} - 2\frac{1}{4} =$

c) i)  $0.5 + 0.2 =$

ii)  $1.8 - 0.7 =$

iii)  $12.3 + 5.86 =$

iv)  $4.23 - 1.6 =$

a) i)  $\frac{4}{3} \times 5 =$

ii)  $14 \times \frac{2}{7} =$

iii)  $\frac{4}{3} \div 5 =$

iv)  $\frac{8}{9} \div 4 =$

b) i)  $1\frac{3}{4} \times 3 =$

ii)  $12 \times 4\frac{2}{5} =$

iii)  $1\frac{1}{8} \div 3 =$

iv)  $2\frac{5}{8} \div 5 =$

c) i)  $0.6 \times 4 =$

ii)  $0.6 \div 4 =$

iii)  $2.7 \div 3 =$

iv)  $2.7 \times 3 =$

d) i)  $\frac{4}{5} \times \frac{1}{2} =$

ii)  $\frac{4}{5} \div \frac{1}{2} =$

iii)  $\frac{6}{5} \times \frac{5}{8} =$

iv)  $\frac{6}{5} \div \frac{5}{8} =$

e) i)  $3 \div \frac{4}{5} =$

ii)  $2\frac{1}{5} \times 5\frac{1}{2} =$

iii)  $9 \div 3\frac{2}{3} =$

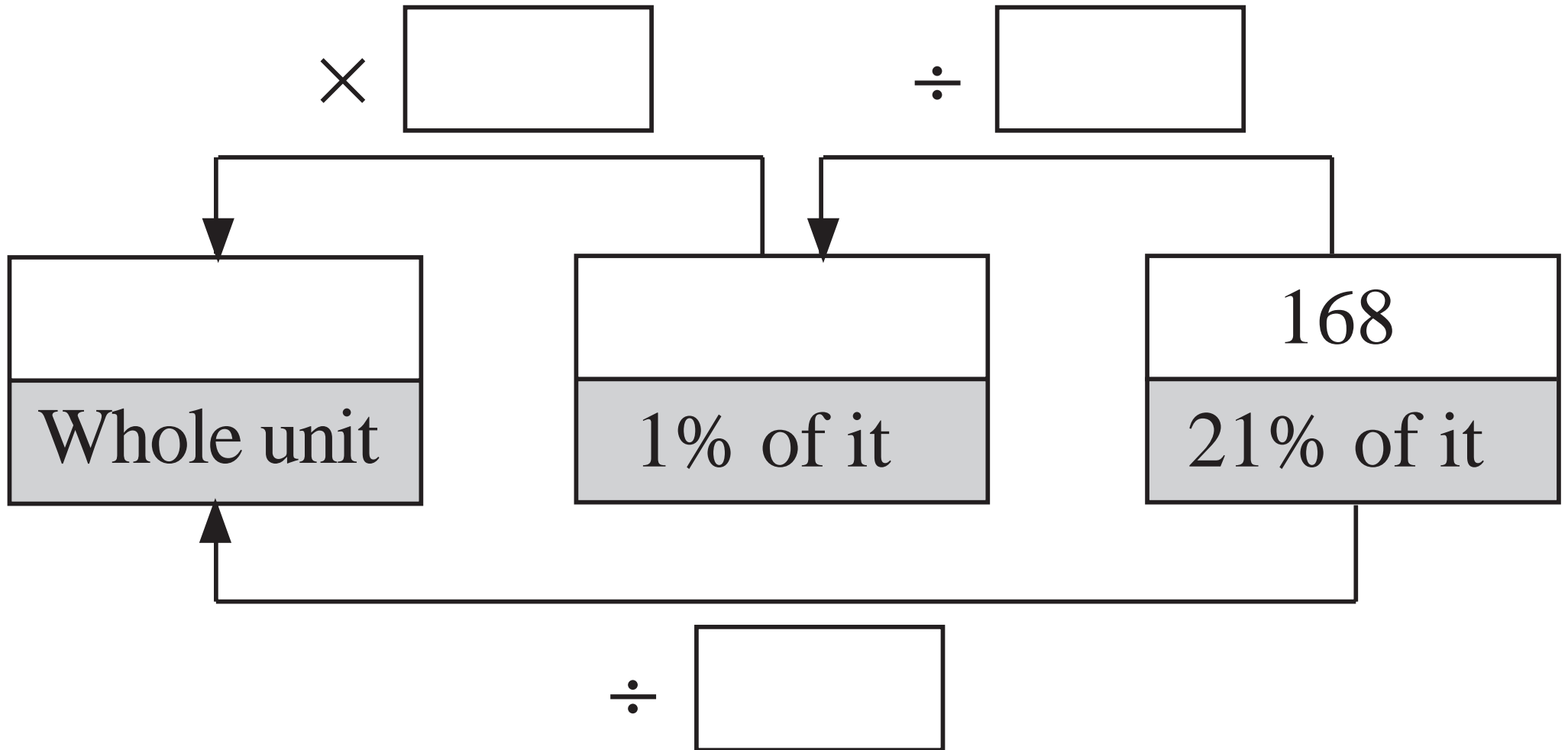
iv)  $5\frac{1}{7} \div 3\frac{5}{14} =$

f) i)  $0.8 \times 0.3 =$

ii)  $2.4 \div 0.3 =$

iii)  $11.4 \times 0.7 =$

iv)  $0.84 \div 1.2 =$



<b>10 hours</b>	1%	5%	10%	25%	50%	75%	100%	200%
in hours	$\frac{1}{10}$							
in minutes	6							
in seconds	360							