

1. A U.K. Member of Parliament was selected at random in 2010.

The probability of selecting a woman was  $\frac{143}{650}$

Work out the probability a man was selected.

Source [www.ukpolitical.info](http://www.ukpolitical.info)

1. ....

2. Five students each throw a biased coin a number of times.

The table shows the total number of throws, the number of heads and the number of tails each student got.

	heads	tails	total
Ines	6	4	10
Jake	15	15	30
Keira	26	14	40
Lenny	57	43	100
Maisie	177	143	320

The coin will be thrown one more time.

- (a) Which of the students' results will give the best estimate for the probability that the coin will land on heads?

Justify your answer.

.....  
 .....

- (b) Use all the results to work out a better estimate for the probability that the coin will land heads.

(b) .....

3. (a) Work out  $\frac{2}{5} \times \frac{3}{4}$

Give your answer in its simplest form.

(a) .....

4. (a) Work out  $\frac{5}{6} \div \frac{7}{12}$

Give your fraction in its simplest form.

(a) .....

5. Solve  $6x + 3 = 27$

 $x = \dots\dots\dots$ 

6. Solve  $4d + 1 = 13$

 $d = \dots\dots\dots$ 

7. Solve  $7x + 1 = x + 13$

 $x = \dots\dots\dots$

8. Expand  $3(k + 5)$

8. ....

9. Expand  $n(n + 4)$

9. ....

10. Expand and simplify  $(x - 4)(x + 5)$

10. ....

11. Expand and simplify  $(y - 3)(y - 2)$

11. ....

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**Stuck?** try these first

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12. (a) Work out  $\frac{1}{2} \times \frac{3}{5}$

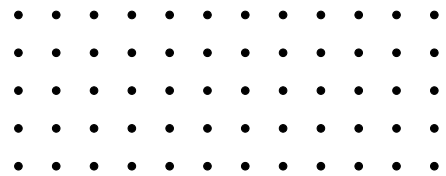
(a) .....

13. (a) Work out  $\frac{2}{7} \div \frac{5}{6}$

(a) .....

14. Complete  $\frac{1}{3} = \frac{\quad}{6}$

You may use this dotted paper to draw fractions



15. Write  $\frac{10}{12}$  in its simplest form.

15. ....

16. Write  $\frac{35}{45}$  in its simplest form.

16. ....

17. Write  $\frac{75}{125}$  in its simplest form.

17. ....

18. Solve  $f - 11 = 43$

 $f = \dots\dots\dots$

19. Solve  $w + 9 = 46$

$w = \dots\dots\dots$

20. Solve  $4y = 12$

$y = \dots\dots\dots$

21. Solve  $\frac{p}{8} = 4$

$p = \dots\dots\dots$

22. (a) Simplify  $x + x + x + x$

(a)  $\dots\dots\dots$

23. (a) Simplify  $9y - 3y$

(a)  $\dots\dots\dots$

24. (a) Simplify  $2y - 3y$

(a)  $\dots\dots\dots$

25. (a) Simplify  $5x - 3y - 8x + 7y$

(a)  $\dots\dots\dots$

26. (a) Simplify  $2 \times 2n$

(a)  $\dots\dots\dots$

27. (a) Simplify  $2x \times y$

(a)  $\dots\dots\dots$

28. (a) Simplify  $2m \times 2n$

(a)  $\dots\dots\dots$