KING EDWARD VI
HANDSWORTH GRAMMAR
SCHOOL FOR BOYS

KING EDWARD VI
ACADEMY TRUST
BIRMINGHAM

Year 8

2026 Mathematics 2027

Unit 7 Student

HGS Maths

Tasks

Dr Frost Course

Name: _____

Class: _____

Contents

1 Prime Factorisation

1.1 Prime Factors

3 is a prime factor of 36 (True / False)

9 is a prime factor of 36 (True / False)

1 is a prime factor of 36 (True / False)

2 is a prime factor of 36 (True / False)

7 is a prime factor of 36 (True / False)

Intelligent Practice

7 is a prime factor of 12 (True / False)

6 is a prime factor of 12 (True / False)

5 is a prime factor of 12 (True / False)

4 is a prime factor of 12 (True / False)

3 is a prime factor of 12 (True / False)

2 is a prime factor of 12 (True / False)

1 is a prime factor of 12 (True / False)

1 is a prime factor of 27 (True / False)

2 is a prime factor of 27 (True / False)

3 is a prime factor of 27 (True / False)

7 is a prime factor of 27 (True / False)

9 is a prime factor of 27 (True / False)

13 is a prime factor of 27 (True / False)

13 is a prime factor of 26 (True / False)

3 is a prime factor of 26 (True / False)

2 is a prime factor of 26 (True / False)

2 is a prime factor of 25 (True / False)

5 is a prime factor of 25 (True / False)

12.5 is a prime factor of 25 (True / False)

1.2 Product of Prime Factors

Product of Prime Factors	Yes / No ?
9×11	
19×11	
19×11^2	
$2 \times 19 \times 11^2$	
$2 \times 19 \times 101^2$	

Intelligent Practice

Product of Prime Factors	Yes / No ?
$5 + 7$	
5×7	
4×7	
3×7	
2×7	
1×7	
$1 \times 7 \times 9$	
$2 \times 7 \times 9$	
$2 \times 7 \times 11$	
$2 \times 7 + 11$	
$2 \times 7 \times 11 \times 21$	
$2 \times 7 \times 11 \times 31$	
$1 \times 2 \times 7 \times 11 \times 31$	
$2 \times 7 \times 7 \times 11 \times 31$	
$2 \times 7^2 \times 11 \times 31$	
$2^2 \times 7^2 \times 11 \times 31$	
$2^3 \times 7^2 \times 11 \times 31$	
$2^3 \times 7^2 \times 11^5 \times 31^4$	
$1^3 \times 7^2 \times 11^5 \times 31^4$	
$2^3 \times 7^2 \times 11^5 \times 41^4$	

Worked Example	Your Turn
Express 24 as a product of prime factors	Express 48 as a product of prime factors

Worked Example	Your Turn
Express 924 as a product of prime factors	Express 588 as a product of prime factors

Worked Example	Your Turn
Express $2^3 \times 3$ as an ordinary number	Express $3^2 \times 5$ as an ordinary number

1.3 Using Product of Prime Factors

Worked Example	Your Turn
$84 = 2^2 \times 3 \times 7$ How is 840 written as its product of prime factors?	$84 = 2^2 \times 3 \times 7$ How is 504 written as its product of prime factors?

Worked Example	Your Turn
$X = 378 \times 12^4$ Write X as a product of its prime factors.	$N = 242 \times 15^2$ Write N as a product of its prime factors.

Worked Example	Your Turn
$C = \mathbf{3}^{\boldsymbol{a}} \times \mathbf{5}^{\boldsymbol{b}}$ a) $3C$ b) $5C$ c) $25C$	$D = \mathbf{3}^{\boldsymbol{e}} \times \mathbf{7}^{\boldsymbol{f}}$ a) $3D$ b) $7D$ c) $27D$

1.4 Factors from Prime Factors

10 is a factor of $2 \times 5 \times 7 \times 11 \times 17$ (True / False)

10 is a factor of $2 \times 5^3 \times 7 \times 11 \times 17$ (True / False)

15 is a factor of $2 \times 5^3 \times 7 \times 11 \times 17$ (True / False)

25 is a factor of $2 \times 5^3 \times 7 \times 11 \times 17$ (True / False)

22 is a factor of $2 \times 5^3 \times 7 \times 11 \times 17$ (True / False)

Intelligent Practice

2 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

3 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

5 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

7 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

4 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

6 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

14 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

21 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

15 is a factor of $2 \times 3 \times 7 \times 13$ (True / False)

15 is a factor of $2 \times 3 \times 5 \times 7 \times 13$ (True / False)

30 is a factor of $2 \times 3 \times 5 \times 7 \times 13$ (True / False)

Intelligent Practice

9 is a factor of $2 \times 3 \times 5 \times 7 \times 13$ (True / False)

9 is a factor of $2 \times 3^2 \times 5 \times 7 \times 13$ (True / False)

9 is a factor of $2 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

4 is a factor of $2 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

4 is a factor of $2^3 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

8 is a factor of $2^3 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

16 is a factor of $2^3 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

2 is a factor of $2^3 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

28 is a factor of $2^3 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

28 is a factor of $2^2 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

28 is a factor of $2 \times 3^2 \times 5 \times 7 \times 23$ (True / False)

1.5 Types of Numbers from Prime Factors

- Square numbers have even powers in their prime factorisation.
- Cube numbers have powers which are multiples of 3.

Product of Prime Factors	Square Number	Cube Number	Neither
$5^2 \times 11$			
$5^2 \times 11^8$			
$5^6 \times 11^8$			
$5^6 \times 11^9$			
$5^6 \times 11^9 \times 17^{13}$			

Intelligent Practice

Product of Prime Factors	Square Number	Cube Number	Neither
2×3			
3×3			
3^2			
3^3			
$3^3 \times 7$			
$3^3 \times 7^2$			
$3^3 \times 7^3$			
$3^2 \times 7^2$			
$5^2 \times 7^2$			
$2 \times 5^2 \times 7^2$			
$2^2 \times 5^2 \times 7^2$			
$2^3 \times 5^2 \times 7^2$			
$2^3 \times 5^3 \times 7^3$			

Intelligent Practice

Product of Prime Factors	Square Number	Cube Number	Neither
$2^4 \times 5^4 \times 7^4$			
$2^5 \times 5^5 \times 7^5$			
$2^6 \times 5^6 \times 7^6$			
$2^7 \times 5^7 \times 7^7$			
$2^8 \times 5^8 \times 7^8$			
$2^9 \times 5^9 \times 7^9$			
$2^9 \times 5^9 \times 7^6$			
$2^2 \times 5^9 \times 7^6$			
$2^3 \times 5^9 \times 7^6$			
$2^6 \times 5^{18} \times 7^{12}$			
$2^6 \times 5^{18} \times 7^{12} \times 11$			
$2^6 \times 5^{18} \times 7^{12} \times 11^2$			
$2^6 \times 5^{18} \times 7^{12} \times 11^3$			

1.6 Using Prime Factorisation to Simplify Fractions

Worked Example	Your Turn
Simplify $\frac{693}{1925}$	Simplify $\frac{693}{1155}$

1.7 Using Prime Factorisation to Find Roots

Worked Example	Your Turn
a) Find $\sqrt{784}$ b) Find $\sqrt[3]{216}$	a) Find $\sqrt{324}$ b) Find $\sqrt[3]{512}$

1.8 The Number of Digits and Trailing Zeroes

Worked Example	Your Turn
a) Determine the number of trailing zeros in the number $2^3 \times 3 \times 5^4$ b) Determine the number of trailing zeros in the number $2^{12} \times 5^{15} \times 11$ c) Determine the number of trailing zeros in the number $8^2 \times 5^7 \times 11$	a) Determine the number of trailing zeros in the number $2^2 \times 3^2 \times 5^5 \times 7$ b) Determine the number of trailing zeros in the number $2^{21} \times 3^5 \times 5^6 \times 13$ c) Determine the number of trailing zeros in the number $3 \times 4^7 \times 25^7$

Worked Example	Your Turn
Determine the number of digits in the number $3 \times 8^6 \times 25^9$	Determine the number of digits in the number $3 \times 4^4 \times 5^8 \times 7$

1.9 Number of Factors

To get the number of factors of a number in prime factorised form, add one to each power and times the powers together.

Worked Example	Your Turn
a) How many factors does 36 have? b) How many factors does 37 have? c) How many factors does 38 have?	a) How many factors does 72 have? b) How many factors does 73 have? c) How many factors does 74 have?

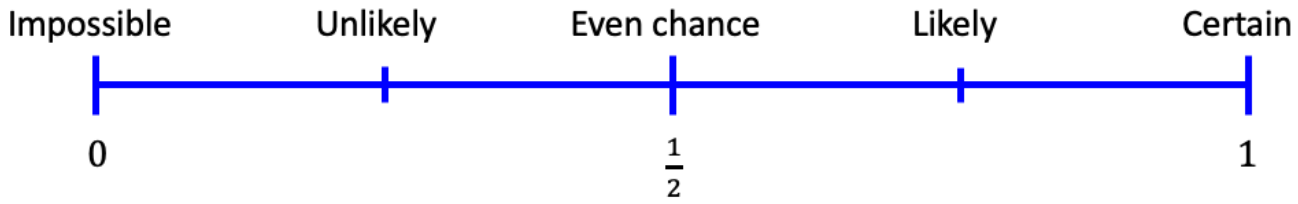
2 Probability

2.1 Probability Scale

- Probability is a numerical measure of how likely or unlikely an event is to occur.

- Probabilities are usually written as fractions, but can be written in any form equivalent to that fraction, e.g., $\frac{3}{4} = 0.75 = 75\%$

- Probabilities can be anywhere between 0 (impossible) and 1 (certain):



Worked Example	Your Turn
Describe using impossible, unlikely, even chance, likely or certain the probability that: a) You will walk to Mars. b) The day after Monday is Tuesday. c) You roll a three on a fair die. d) You flip a tails on a fair coin.	Describe using impossible, unlikely, even chance, likely or certain the probability that: a) You roll an even number on a fair die. b) The day after Monday is Wednesday. c) You roll a number between 1 and 6 on a fair die. d) You will go to space in your life.

2.2 Probability of Single Events

Worked Example	Your Turn
A bag of sweets contains only 4 red sweets, 2 yellow sweets and 4 green sweets. a) What is the probability of choosing a red sweet? b) What is the probability of choosing a red or yellow sweet? c) What is the probability of choosing a mint?	A bag of sweets contains only 8 red sweets, 4 yellow sweets and 8 green sweets. a) What is the probability of choosing a red sweet? b) What is the probability of choosing a red or yellow sweet? c) What is the probability of choosing a mint?

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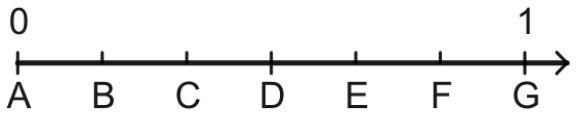
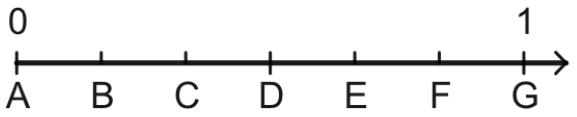
Worked Example

Albert throws a fair six-sided dice. Select the letter that matches the probability of the dice landing on a number which is 2 or more.



Your Turn

Spencer throws a fair six-sided dice. Select the letter that matches the probability of the dice landing on a number which is 5 or more.



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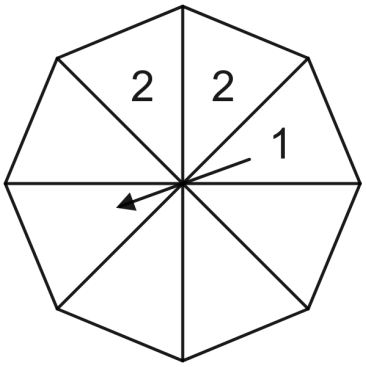
Worked Example	Your Turn
There are 8 counters in a bag. There is at least one counter that is brown, one that is white and one that is yellow. There are no other colours of counter in the bag. Thiago will remove one counter at random from the bag. The chance it is brown is evens. The chance it is white is more likely than yellow. Determine how many brown counters were initially in the bag.	There are 6 counters in a bag. There is at least one counter that is white, one that is blue and one that is red. There are no other colours of counter in the bag. Fatima will remove one counter at random from the bag. The chance it is white is evens. The chance it is blue is more likely than red. Determine how many blue counters were initially in the bag.

Worked Example

Each section of the spinner below is the same size.



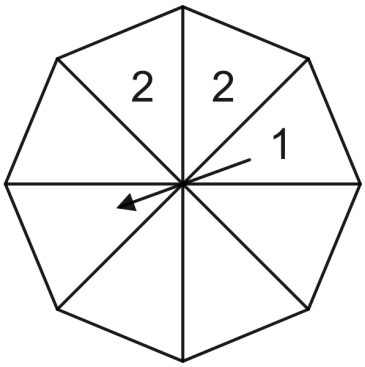
Heitor wants the spinner to only have the numbers 1, 2, 3, or 4 on it, and for the following statements are true:

It is equally likely to get a 3 or 2
It is more likely that you will get a 4 than a 2

Determine the numbers Heitor must put on the spinner.

Your Turn

Each section of the spinner below is the same size.



Thomas wants the spinner to only have the numbers 1, 2, 3, or 4 on it, and for the following statements are true:

It is equally likely to get a 3 or 4
It is more likely that you will get a 2 than a 3
It is more likely that you will get a 3 than a 1

Determine the numbers Thomas must put on the spinner.

2.3 Mutually Exclusive Events

Worked Example

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

Colour	Probability
yellow	0.14
white	0.22
green	0.22
red	0.24
black	0.18

Find the probability of selecting a green **or** a red counter.

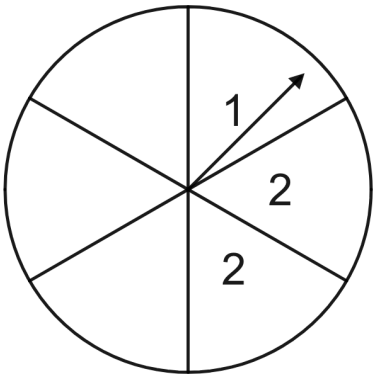
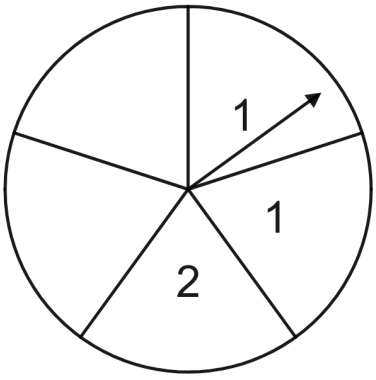
Your Turn

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

Colour	Probability
white	0.19
blue	0.23
yellow	0.18
black	0.17
brown	0.13
green	0.10

Find the probability of selecting a blue **or** a brown counter.

Worked Example	Your Turn
A fair spinner has 6 sides. Each side is labelled 1 or 2 The probability of the spinner landing on 1 is $\frac{2}{3}$ Here is the spinner with 3 sides labelled.  Label the other sides with 1 or 2 to give the correct probability of landing on a 1	A fair spinner has 5 sides. Each side is labelled 1 or 2 The probability of the spinner landing on 1 is $\frac{4}{5}$ Here is the spinner with 3 sides labelled.  Label the other sides with 1 or 2 to give the correct probability of landing on a 1

Worked Example

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 125 counters in the bag.

Colour	Probability
red	0.24
yellow	0.12
black	0.08
white	0.28
purple	0.28

Work out the total number of red counters in the bag.

Your Turn

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 75 counters in the bag.

Colour	Probability
green	0.08
blue	0.24
yellow	0.28
black	0.12
brown	0.28

Work out the total number of blue counters in the bag.

Worked Example

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 3 black counters in the bag.

Colour	Probability
red	0.1
blue	0.25
black	0.05
white	0.3
brown	0.3

Work out the total number of counters in the bag.

Your Turn

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 21 purple counters in the bag.

Colour	Probability
green	0.24
yellow	0.12
black	0.16
white	0.2
purple	0.28

Work out the total number of counters in the bag.

Worked Example

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 12 purple counters in the bag.

Colour	Probability
red	0.35
blue	0.15
white	0.1
brown	0.3
purple	0.1

Work out the total number of blue counters in the bag.

Your Turn

A bag contains counters of different colours.

The table shows the probability that a counter selected at random from the bag will be of the given colour.

There are 112 purple counters in the bag.

Colour	Probability
red	0.24
yellow	0.14
black	0.18
white	0.16
purple	0.28

Work out the total number of yellow counters in the bag.

2.4 Exhaustive Events

Worked Example	Your Turn
There are green, red and blue counters in a bag. The chance of picking a green counter is 0.1. The chance of picking a red counter is 0.3. What is the chance of picking a blue counter?	It is either raining or not raining. The chance that it rains tomorrow is 0.55. What is the chance that it does not rain?

Worked Example

The sides of a spinner are labelled with colours. The spinner is biased. The table shows the probability that the spinner will land on each of the colours red, black, purple or blue. The probability for Black is twice as likely as for Purple. Work out the probability the spinner will land on black.

Colour	Red	Black	Purple	Blue
Probability	0.1			0.3

Your Turn

The table shows each of the probabilities that a counter taken at random will be red, green, yellow, blue or black. The probability for Green is twice as likely as for Red. Work out the probability that a counter taken at random will be red.

Colour	Red	Green	Yellow	Blue	Black
Probability			0.15	0.25	0.3

2.5 Expectation

Worked Example

The table shows each of the probabilities that a counter taken at random will be white, black, yellow or purple.

Colour	White	Black	Yellow	Purple
Probability	0.2	0.2	0.2	0.4

Amelia selects a counter at random 50 times. Work out an estimate for the total number of times the counter will be white.

Your Turn

The sides of a spinner are labelled with colours. The spinner is biased. The table shows the probability that the spinner will land on each of the colours black, blue, red or white.

Colour	Black	Blue	Red	White
Probability	0.15	0.2	0.2	0.45

Harry spins the spinner 60 times. Work out an estimate for the total number of times the spinner will land on red.

Worked Example

Victor works at the local dog shelter.

He has five types of dog food to feed the dogs.

The table below shows the probabilities that Victor will take a tin of the given flavour.

Dog Food	Beef	Turkey	Bacon	Lamb	Pork
Probability	0.22	0.24	0.24		0.16

Victor has 300 tins of dog food.

Work out the number of tins of lamb dog food he has.

Your Turn

The table shows the probabilities of a biased die. The probability for rolling a 1 is missing.

Number on die	1	2	3	4	5	6
Probability		0.1	0.15	0.2	0.1	0.25

Ámbar rolls the die 180 times.

Work out an estimate for the total number of times the dice will land on 1 or 6

Worked Example	Your Turn
Keith designs a game. It costs $£1.60$ to play the game. The probability of winning the game is $\frac{2}{5}$ The prize for each win is $£3$ 80 people play the game. Work out an estimate of the profit that Keith should expect to make.	Bob designs a game. It costs $50p$ to play the game. The probability of winning the game is $\frac{1}{4}$ The prize for each win is $£1.50$ 100 people play the game. Work out an estimate of the profit that Bob should expect to make.

Worked Example	Your Turn
There are only yellow counters, pink counters and orange counters in a bag. number of yellow counters : number of pink counters : number of orange counters $= 5 : 3 : 14$ Ámbar takes at random a counter from the bag and records the colour of the counter. She then puts the counter back in the bag. Ámbar does this a number of times. She records a total of 30 yellow counters. Work out an estimate for the total number of times Ámbar takes a counter from the bag.	There are only blue counters, white counters and pink counters in a bag. number of blue counters : number of white counters : number of pink counters $= 14 : 8 : 1$ Quinn takes at random a counter from the bag and records the colour of the counter. They then put the counter back in the bag. Quinn does this a number of times. They record a total of 112 blue counters. Work out an estimate for the total number of times Quinn takes a counter from the bag.

2.6 Relative Frequency

Worked Example	Your Turn
A coin is flipped 30 times. The results are: H T H H H H H H T T T H H T T T T T H H H T T H H T H T H H a) What are the relative frequencies for heads and tails? b) The coin is flipped 300 times. Estimate how many times the coin will land on tails.	A coin is flipped 20 times. The results are: T H T T T T T H H H H H T H T H H H H H a) What are the relative frequencies for heads and tails? b) The coin is flipped 100 times. Estimate how many times the coin will land on tails.

Worked Example	Your Turn
There are 24 counters in a bag. 8 of the counters are white. 13 of the counters are black. The rest of the counters are green. 12 more counters are put in the into the bag. When a counter is taken at random from the bag, the probability that it is green is now $\frac{1}{4}$ Find out how many of the counters that were put in the bag are green.	There are 19 counters in a bag. 8 of the counters are brown. 3 of the counters are purple. 5 of the counters are green. The rest of the counters are white. 16 more counters are put in the into the bag. When a counter is taken at random from the bag, the probability that it is white is now $\frac{2}{7}$ Find out how many of the counters that were put in the bag are white.

2.7 Listing Outcomes

Outcomes and Events

When we roll a six-sided die there are 6 outcomes.
The outcomes are the results we could get from rolling the die.

Outcomes: 1, 2, 3, 4, 5, 6.

An event is one or more outcomes.

Event	Outcome(s)
A square number	
A 3	
A factor of 8	
A multiple of 3	

Here is a spinner numbered 1 to 8.
List the outcome(s) for each event.

Event	Outcome(s)
An even number	
A number less than 3	
A number greater than 7	
An integer	
A 5	
A 2-digit number	

Worked Example	Your Turn
List all the ways of arranging the letters in the word: CAT	List all the ways of arranging the letters in the word: DOG

Worked Example	Your Turn
I flip a coin and then roll a six-sided die. List the possible outcomes.	I flip a coin and then roll a 4-sided die. List the possible outcomes.

Worked Example	Your Turn
The first five positive integers are $1, 2, 3, 4, 5$. I choose two numbers from this list without repeats. Write down all possible combinations of two numbers I can choose.	The four square numbers are $1, 4, 9, 16$. I choose two numbers from this list without repeats. Write down all possible combinations of two numbers I can choose.

2.8 Sample Space Diagrams

Worked Example	Your Turn
Elisa throws a spinner with faces labelled R, G, B and Y and a four-sided dice numbered -1, -2, -3 and -4 at the same time. Draw a sample space diagram.	Elisa throws a spinner with faces labelled R, G, B and Y and a four-sided dice numbered 2, 4, 6 and 8 at the same time. Draw a sample space diagram.

Worked Example	Your Turn
Noel throws a four-sided dice and a four-sided dice at the same time and adds up the scores. Draw a sample space diagram.	Kayleigh throws a four-sided dice numbered 2, 4, 6 and 8 and a four-sided dice at the same time and adds up the scores. Draw a sample space diagram.

Worked Example	Your Turn
Carolina throws a four-sided dice numbered 1, 3, 5 and 7 and a four-sided dice numbered -1, -2, -3 and -4 at the same time and multiplies the scores. Draw a sample space diagram.	Carolina throws a six-sided dice and a four-sided dice numbered -1, -2, -3 and -4 at the same time and multiplies the scores. Draw a sample space diagram.

Worked Example	Your Turn
Paul throws a four-sided dice numbered 2, 4, 6 and 8 and a four-sided dice numbered 1, 3, 5 and 7 at the same time and find the difference between the scores. Draw a sample space diagram.	Kayleigh throws a four-sided dice and a six-sided dice at the same time and find the difference between the scores. Draw a sample space diagram.

Worked Example

Lisa throws a four-sided dice and a six-sided dice at the same time and find the difference between the scores. The sample space diagram below shows all the possible outcomes.

	1	**2**	**3**	**4**
1	0	1	2	3
2	1	0	1	2
3	2	1	0	1
4	3	2	1	0
5	4	3	2	1
6	5	4	3	2

Find the probability that Lisa gets a difference which is 3 or more.

Your Turn

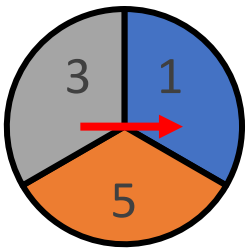
Joel throws a four-sided dice numbered 2, 4, 6 and 8 and a four-sided dice at the same time and find the difference between the scores. The sample space diagram below shows all the possible outcomes.

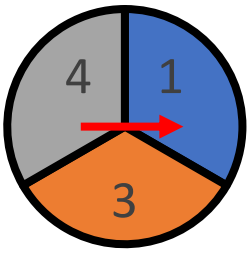
	2	**4**	**6**	**8**
1	1	3	5	7
2	0	2	4	6
3	1	1	3	5
4	2	0	2	4

Find the probability that Joel gets a difference which is 4 or less.

Worked Example

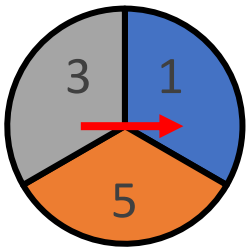
I spin these two spinners then add the numbers together to get a score.
Work out the probability that I get a score of 4.

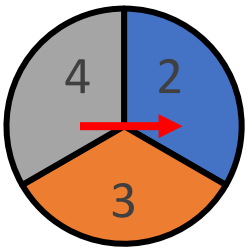




Your Turn

I spin these two spinners then add the numbers together to get a score.
Work out the probability that I get a score of 4.





3 Expanding Single Brackets

3.1 Expanding Single Brackets without Powers

Worked Example	Your Turn
Expand: a) $2(x-3)$ b) $-2(x-3)$	Expand: a) $2(3-x)$ b) $-2(3-x)$

3.2 Expanding Single Brackets with Powers

Worked Example	Your Turn
Expand: a) $2x(x-3)$ b) $-2x(x-3)$	Expand: a) $2x(3-x)$ b) $-2x(3-x)$

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3.3 Expanding Single Brackets with Index Laws

Worked Example	Your Turn
Expand and simplify: a) $a^3bc(10b^2c^2 + 9a^2)$ b) $4a^5b^2(3a^4b^4 - 5b^2)$	Expand and simplify: a) $a^3b^5(3a^3b + 7ab^4c)$ b) $7x^5y^4(6x^2y + 5x^4y)$

3.4 Expanding and Simplifying Single Brackets

Worked Example	Your Turn
Expand and simplify: a) $4 + 7(6x - 5)$ b) $8x + 6 + 7(5x + 9)$	Expand and simplify: a) $-5 + 2(4y - 1)$ b) $6z + 3 + 5(7z + 2)$

Worked Example	Your Turn
Expand and simplify: a) $2(x-1)+3(x-4)$ b) $2(x-1)-3(x-4)$	Expand and simplify: a) $2(x-1)+5(x-4)$ b) $2(x-1)-5(x-4)$

Worked Example	Your Turn
Expand and simplify: a) $2x(x-1)-3x(x-4)$ b) $2x(x-1)-3(x-4)$	Expand and simplify: a) $2x(x-1)-5x(x-4)$ b) $2x(x-1)-5(x-4)$

Worked Example	Your Turn
Expand and simplify: a) $5-(2-3x)$ b) $3x(5x+4)-(2x-1)$	Expand and simplify: a) $5x-(x-6)$ b) $5(1-5x)-(x+3)$

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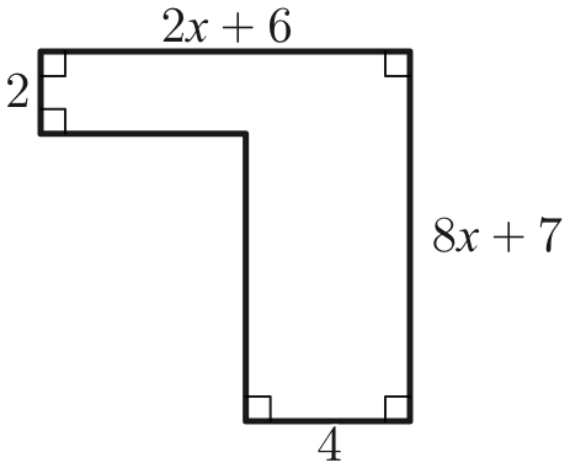
Worked Example

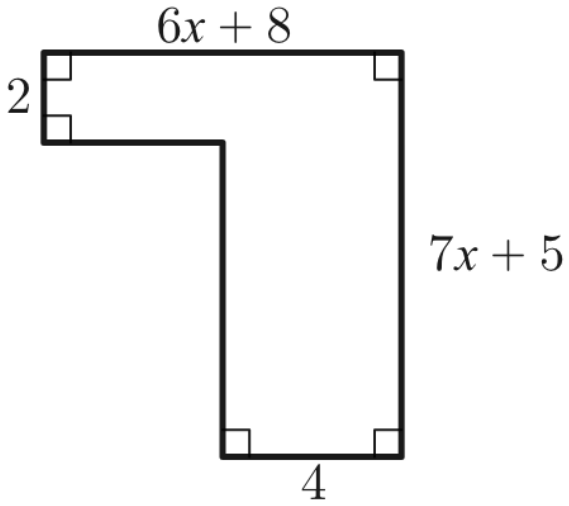
Find an expression for the area of the shape below.



Give your answer in its simplest form.

Your Turn

Find an expression for the area of the shape below.



Give your answer in its simplest form.