M1 Maths – Fun and Games

Group Problem Solving

Aim

To develop motivation and skills for problem solving and group cooperation.

Students seem to be more prepared to persist and struggle with a problem if they are working as part of a group in competition with other groups than when working by themselves. They will probably think as hard about a maths problem here as they will anywhere.

By discussing and arguing, they get ideas from their peers about how to think effectively mathematically.

Procedure

Before class, choose a problem set, print enough copies for each group (3 students per group) and one for yourself. Cut them into strips, one problem per strip, tie breaker and answers in the last strip. Bundle the trips with a rubber band, all the Question 1s at the top, tie breaker and answers at the bottom.

Also find about 60 tokens, e.g. plastic counters or multilink cubes and put them in a bag.

In class, get the students to divide into groups of 3. Allow a 2 or 4 if the number of students isn't a multiple of 3. Get each group to sit around one desk, as far as possible from other groups. They should have pens, scribbling paper and calculators in front of them. If it is the first time they have played, explain the rules. Be prepared to spend some time explaining.

When ready to start, walk around the room handing out the first problem. Students start work as soon as they have the problem. They write the answer in the space to the right of the problem when they have it. Groups may eaves drop on other groups. Therefore it is worth talking quietly. Groups which move to look at what other groups are doing or which communicate with other groups, however, disqualify themselves from the current question.

When some of the groups have finished, warn them that there are 30 seconds to go. After this time has expired, say 'Coming round now' and pass around the tables (in the same order and at the same speed) placing a token on each table where they have the correct answer. They must have the answer down when you arrive (do not wait while they write), it must be clear and there must be just one answer there (other crossed out answers are ok).

For dramatic effect, make a bit of noise when you place the token on the desk.

Before going on to the next problem, give at least one method for solving the last one (unless all groups got it right).

For the next question, pass around the room in the opposite direction.

After the last questions, the winning team is the one with the largest number of tokens. If there is a draw, those teams who drew play a tie breaker. For this, read out the tie breaker question – twice. When a team has an answer, one person stands up and shouts it out. If it is correct, they win. If wrong, that team is out. If there is only one team left, they win, even if they don't answer.

There are quite a few problem sets below. The later sets tend to be harder than the earlier ones. You can look through these to find a suitable set, you can change some of the questions if you like, or you can make up your own sets to suit your students or your current topic of study.

Variations

It is possible to have inter-class contests. Each class puts in their teams. The winning class is the class for which the average number of tokens per group is largest. A tie breaker is not likely to be needed, but if it is, each class can nominate one team to compete. The team should be one of the teams that competed in the main part of the game.

A knock-out competition can be organised between several classes. This will motivate students to develop their class's problem-solving skills.

Students will realise that when competing against other classes, they will do best to have their best problem solvers distributed amongst the groups. This will encourage them to work with people they might not otherwise work with.

Tips

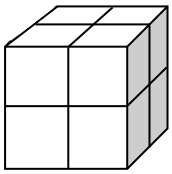
Small prizes for the winning teams can help with motivation, but are not really necessary.

It can be hard to get the students to stay quiet and pay attention while you explain how the answer is obtained, particularly those who got it right. One way to deal with this is to call out something distinctive like 'Hear Ye!' before you start and any group that talks from the time you say that to when you've finished explaining loses a token. If they have no tokens, you might give an extra token to the other teams.

1 A plane flies 250 km per hour. How many kilometres will it fly in 4½ hours?

2 Jose has $60. If he spends ¾ of it, how much will he have left?

3 How many small cubes does it take to make this bigger cube?



4 Fred put a cake in the oven at 10:50 am. At 12.05 pm it was half baked. When was it completely baked?

5 If there are 12 inches in a foot and 3 feet in a yard, how many inches are there in 2½ yards?

6 How many numbers between 701 and 760 are multiples of 7?

7 Amy divided a number by 3, then added 12, then multiplied by 2. She ended up with 34. What number did she start with?

Tie breaker: If you wrote all the whole numbers from 40 to 60, how many times would you write the digit 5?

Answers: Q1 1125, Q2 $15, Q3 8, Q4 1:20 pm, Q5 90, Q6 8, Q7 15, TB 12.

1 Find the next number in this pattern:

5, 8, 12, 17, 23, 30, 38, …

2 Jodi and Van paid $60 between them for a box of turtles. Jodie paid $8 more than Van. How much did Van pay?

3 Four people met at a party and each of them gave a gift to each of the others. How many gifts were given?

4 What day of the week is it 71 days after Sunday?

5 How many numbers between 1 and 100 are multiples of 6?

6 Three runners, Albert, Bonzo and Cad, run a race. In how many different orders can they finish if there are no ties?

7 Gina bought a pack of 60 tic tacs, She ate one tic tac on Monday, 2 on Tuesday, 3 on Wednesday, 4 on Thursday and so on. On what day of the week did she eat the last one?

Tie Breaker: Jangli thought of a number, multiplied it by itself, then added the number she started with. This made 72. What number did she start with?

Answers: Q1 47, Q2 $26, Q3 12, Q4 Monday, Q5 16, Q6 24, Q7 Thursday, TB 8

1 How many cubic centimetres of air in a box 25 cm by 20 cm by 10 cm?

2 Josh thought of a number, multiplied it by 4, then subtracted 13. This gave him 79. What number did he start with?

3 How many minutes in June?

4 Find the next number in this pattern:

4, 7, 12, 19, 28, 39, 52, …

5 By what two whole number can 91 be divided by without leaving a remainder (other than 1 and 91)?

6 A diagonal of a polygon is a line connecting two corners that are not next to each other. How many different diagonals can be drawn in a regular hexagon?

7 A cake was put in the oven at 11:30 a.m. and was baked by 1:10 p.m. When was it half baked?

Tie breaker: How many diagonals can be drawn in a regular octagon?

Answers: Q1 5000; Q2 23; Q3 43 200; Q4 67; Q5 7, 13; Q6 9; Q7 12:20; TB 20

1 Find the next number in this pattern

78, 66, 56, 48, 42, 38, ….

2 Stefan bought 40 raisins, then ate one fifth of them. How many did he have left?

3 How fast would a cyclist have to go to cover 72 km in 4 hours?

4 How many 20 cm by 20 cm square tiles does it take to cover a 4 m by 5 m rectangular floor?

5 Alicia had some wooden cubes. Each was 1 cm by 1 cm by 1 cm. How many could she pack into a box which was 2 cm by 5 cm by 10 cm?

6 A circular crater is 400 metres across. The distance around it is closest to:

a: 400 m b: 800 m c: 1200 m d: 1600 m

7 If a team of 4 spider monkeys can pack 5 cartons of lip gloss in an hour, how long will it take the team to pack 15 cartons?

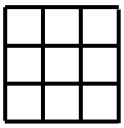
Tie breaker: Tommy thought of a number, multiplied it by itself, then added 37. This gave him 101. What number did he start with?

Answers: Q1 36, Q2 32, Q3 18 kph, Q4 500, Q5 100, Q6 c, Q73 hours, TB 8

1 What is the 20^{th} number in this pattern?

11, 15, 19, 23, ...

2 There are small, medium and large squares in this figure. How many squares altogether?



3 x is a number. When x was subtracted from 40, the result was 13. What number is x?

4 A rectangular paddock is 400 m around the outside. If it is 120 m long, how wide is it?

5 If 4 people can pick 8 tonnes of grapes in 2 days, how many tonnes would the 4 people pick in 5 days?

6 100 people go to a sports centre. Each plays either basketball, squash or badminton. Twice as many play basketball as badminton. 10 Play squash. How many play basketball?

7 How many 2 cm by 2 cm square tiles would it take to cover a square piece of plywood 20 cm by 20 cm?

Tie breaker: If you wrote all the whole numbers from 1 to 100, how many times would you write the digit 2?

Answers: Q1 87; Q2 14; Q3 27; Q4 80 m; Q5 20: Q6 60; Q7 100; TB 20

1 How many 2 cm wooden cubes will fit into a box which is 20 cm long, 10 cm wide and 4 cm high?

2 Josh thought of a number, multiplied it by 2, then added 3. This gave him 13. What number did he start with?

3 How many hours in June?

4 Find the next number in this pattern:

4, 7, 12, 19, 28, 39, 52, …

5 A diagonal of a polygon is a line connecting two corners that are not next to each other. How many different diagonals can be drawn in a regular hexagon?

6 Besides 1 and 91, what are two factors of 91?

7 An oven at 220° was turned off at 1:40 pm, then cooled at 2° per minute. At what time did it reach 60°?

Tie breaker: How many diagonals can be drawn in a regular pentagon?

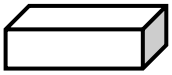
Answers: Q1 100; Q2 5; Q3 720; Q4 67; Q5 9; Q6 7,13; Q7 3 pm; TB 5

1 4 people get together for a problem solving competition and all shake hands with each other. How many hand shakes take place?

2 A Russian bus travels for 4 hours and 30 minutes at 60 kph. How far does it go?

3 Marie thought of two numbers. The second number was 7 more than the first. Their sum was 49. What was the smaller number?

4 A box is a rectangular prism in shape. It measures 5 cm by 4 cm by 2 cm. How many 1 cm by 1 cm stickers would it take to cover all six faces?



5 ¾ of a number is 24. What is the number?

6 27 small cubes are put together to make a big cube. It is then painted on the outside. How many small cubes get paint on them?

7 Alan is 18 years old, Fiona is 15, Janice is 13 and Carla has forgotten her age. If the average age of the four is 12, how old is Carla?

Tie breaker: A cake is put in the oven at 2:30 and is half baked by 3:50. When is it completely baked?

Answers: Q1 6, Q2 270 km, Q3 21 Q4 76, Q5 32, Q6 26, Q7 2, TB 5:10

1 Find the missing number in this pattern:

3, 6, …, 24, 48, 96

2 If there are 3 feet in a yard and 22 yards in a chain, how many feet in ¼ chain?

3 How many 50 cm by 50 cm carpet squares does it take to cover a rectangular floor 12 m by 9 m?

4 Fred thought of a number, multiplied it by itself, then added 13. This made 542. What number did he think of?

5 If Marlon drives at 90 kilometres per hour, how long, in hours and minutes, will it take him to drive 645 kilometres?

6 What is the date 150 days after May 14?

7 Kaylee went to sleep at 9:25 pm and woke up at 7:15 am the next morning. How long did she sleep?

Tie breaker: What is the smallest number which is a multiple of 1, 2, 3, 4, 5 and 6 ?

Answers: Q1 12; Q2 16.5; Q3 432; Q4 23; Q5 7:10; Q6 Oct 11; Q7 9 h 50 m; TB 60

1	Edith drove the 205 miles from Brisbane to Bundaberg. 88 miles after leaving Brisbane, she passed through Gympie. How many miles is Gympie from Bundaberg?
2	What is the smallest number of triangles that a regular hexagon can be cut into?
3	Which is most: 7%, 0.6, $^2/_3$, $^3/_4$, or $^5/_8$?
4	One worker can pack 6 cartons per hour. How many cartons will 4 workers pack in 2 hours?
5	Look at these numbers: 3, 8, 24, 6, 3, 4, 7. Which would be in the middle if you put them in order from smallest to biggest?
6	How many factors does 60 have?
7	Coke is \$1:10 per bottle, but there is a 10% discount if you buy more than 6 bottles. How much will 10 bottles cost?

Tie breaker: In how many different orders can you write the letters A, B and C?

Answers: Q1 117; Q2 4; Q3 $^3/_4$; Q4 48; Q5 6; Q6 12; Q7 \$9.90; TB 6

1 An L-shaped room has side lengths (in order as you walk round) of 6 m, 4 m, 3 m, 1 m, 3 m, 3 m. What is its area?

2 How many rectangles in this diagram? 

3 x is a number. When half of x was subtracted from 40, the result was 28. What number is x?

4 A rectangular paddock is 1000 m around the outside. If it is 300 m long, what is its area in hectares?

5 If 6 people can pick 8 tonnes of grapes in 2 days, how many tonnes would the 8 people pick in 5 days?

6 100 people go to a sports centre. Each plays either basketball, squash or badminton. Twice as many play basketball as badminton. 10 Play squash. How many play basketball?

7 How many 2 cm by 2 cm square tiles would it take to cover a piece of plywood 6 m by 5 m?

Tie breaker: 2 people want to sit down. There are 4 seats in a row. In how many ways can they arrange themselves? (Demonstrate)

Answers: Q1 21 m^2; Q2 9; Q3 24; Q4 6; Q5 $26^2/_3$; Q6 60; Q7 75 000; TB 12

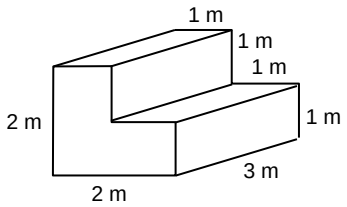
1 Misha buys a $15 spanner and a $9.50 drill bit. Both are reduced 20%. How much does she pay altogether?

2 If I face northeast, then turn 45° to the left 15 times, which direction will I end up facing?

3 If I pick a whole number from 1 to 20 inclusive, what is the probability that it will be composite?

4 6 regular hexagons, each with a perimeter of 6 cm, are put together to make a shape with the smallest possible perimeter. What is the perimeter?

5 After adding 10% for GST, a shirt costs $23.10. What would it have cost without the GST?

6 

Find the volume of this prism.

Include the units.

7 $44-\frac{12+14}{4\times13}-1.5$

Tie breaker: What is the smallest number which is a multiple of 1, 2, 3, 4, 5 and 6 ?

Answers: Q1 $19.60; Q2 East; Q3 $^{11}/_{20}$; Q4 18 cm; Q5 $21; Q6 9 m^3; Q7 42; TB 60

1	Add 40% to \$50, then take 40% off the result.
2	Gran put \$1000 into an interest-bearing bank account and left it there for 4 years. Each year her balance increased by 10%. How much did she have after the 4 years?
3	7 equilateral triangles with sides 2 cm long are put together to make a shape. What is the smallest possible perimeter of the shape?
4	How many boxes, each 5 cm by 4 cm by 2 cm, could you fill if you had one litre of water?
5	Find the difference between the sum of the internal angles in a decagon and the number of minutes in a day.
6	What is the probability of picking a 7, 8 or 9 from a pack of cards if it has 2 jokers in it as well as the regular cards? Answer as a fraction in simplest form.
7	Find the next number: 2, 9, 28, 65, 126, 217, . . .

Tie breaker: What is the smallest number which is a multiple of 1, 2, 3, 4, 5, 6 and 7 ?

Answers: Q1 \$42; Q2 1464.10; Q3 14 cm; Q4 25; Q5 0; Q6 $^2/_9$; Q7 344; TB 420

1	Germy was in the shower from 10:34 a.m. until 1:17 p.m. How long was his shower in hours and minutes?
2	An inch is 2.54 cm. A foot is 12 inches. If someone is 5 feet 7 inches tall, what is that in centimetres?
3	If a nerve can fire every 4 ms (milliseconds), how many times can it fire in 1 minute and 10 seconds?
4	How many ways can 4 people be placed into 4 prison cells assuming that everyone has to have their own cell?
5	How many ways can 4 prisoners be put into 4 cells assuming that any number can go into a cell?
6	If 4 prisoners are put into 4 cells at random, what is the probability that they will all have their own cell? Give the answer as a common fraction in simplest form.
7	How many ways can 4 prisoners be put into 4 cells if a maximum of 3 prisoners are allowed in a cell?

Tie breaker: How many factors does 100 have?

Answers: Q1 2 h 43 min; Q2 170.18; Q3 17500; Q4 24; Q5 256; Q6 $^{3}/_{32}$; Q7 252; TB: 9

1	Half of a number plus a third of the same number adds up to 40. What is the number?
2	There are 8 furlongs in a mile and there are 10 acres in a square furlong. How many acres in a square mile?
3	5 prisoners are put in 5 cells, one to a cell. How many ways can they be arranged?
4	125 small cubes are put together to make a large cube. How many small cubes are on the outside of the large cube?
5	It takes 25 drips of water to make 1 cm^3. If a tap drips once a second, how many days will it take to waste 0.3456 kL of water?
6	What is the probability of getting a total of 3 when you roll 2 dice? Answer as a fraction in simplest form.
7	A block of units has letter boxes numbered 1, 2, 3, . . . If it took 61 digits to number all the letter boxes, how many letter boxes are there?

Tie breaker: 1728 small cubes are put together to make a large cube. How many small cubes are on the outside of the large cube?

Answers: Q1 48; Q2 640; Q3 120; Q4 98; Q5 100 days; Q6 $^1/_{18}$; Q7 35; TB 728

1	Mac the machinery salesman gets a $300 per fortnight retainer plus 5% commission. How much would he earn in a fortnight in which he sells $15 000 worth of machinery?
2	Cheryl gets a $200 per week retainer and 10% commission. How much would she need to sell in a week to earn $1250?
3	A grocer buys a cabbage for $40 and marks it up 20%. 3 weeks later, it hasn't sold so he reduces it by 40%. How much will it sell for and what overall percentage loss does he make? [2 points]
4	I bought a suit of armour in a 60%-off sale for $2800. What would it have cost before the sale?
5	Make p the subject of $a = 2p^2 + r$.
6	Solve $\frac{2x+5}{3} = 11$
7	Pansy thought of a number, added 5, then divided by 4. This gave him 3.5. What number did he start with?

Tie breaker: Take 8.5% off $230

Answers: Q1 $1050; Q2 $10 500; Q3 $28.80, 28%; Q4 $7000; Q5 p= root((a-r)/2); Q6 14; Q7 9; TB: 210.45

1	Find the next number: 13, 18, 25, 34, 45, 58, . . .
2	Mrs Gobblethwaite had 4 children. Each of her children had 3 children. Each of her grandchildren had 2 children. How many descendents did Mrs Gobblethwaite have?
3	Aliens are equally likely to land any time of the day or night. If one lands, what is the probability that it will be between 10 p.m. and 4 a.m.? Answer as a percentage.
4	Doug worked Saturday and Sunday picking strawberries. He worked 4 hours Saturday and 9 hours Sunday. He picked 287 boxes, each weighing between 240 g. He was paid $14 per hour. How many hours did he work on the weekend?
5	Fred, Casper, Myrtle and Veronica have an average age of 23 years. Fred is twice as old as Casper. Casper is one year older than Myrtle. If Casper is 11, how old is Veronica?
6	Nerdle is 12 km NE of Tubbitown. Migglesbrook is 12 km SW of Gammo. Gammo is 12 SE east of Nerdle. In what direction is Migglesbrook from Nerdle?
7	How many multiples of 5 have 3 digits?

Tie Breaker: Find the area of an equilateral triangle with side lengths 10 cm. Answer in cm^2 correct to 1 decimal place.

Answers: Q1 73; Q2 40; Q3 25%; Q4 13; Q5 49; Q6 S; Q7 180; TB 43.3

1 Some of the following letters have a line of symmetry.

G J O N Z S H P M T R Q Z F N

Make a four-letter English word using them all.

2 Jeremy lost 40% of his marbles and then lost 50% of what he had left. What percentage did he lose altogether?

3 Noab was at Scotston, 4°N 89°W. He wanted to fly to Welshpool, 8°S, 76°W. In roughly which direction should he fly? Choose between N, NE, E, SE etc.

4 Dargo started work at 7:30 a.m. and did two 7h 40 min shifts with a half hour break in between. When did he finish work? Don't forget the a.m. or p.m.

5 1 litre of copper weighs 7.5 kg. What would be the volume in cm^3 of a 3 kg copper statuette?

6 If you faced NE, then turned 171 495° to your right, in which direction would you be facing?

7 A rock consists of quartz, feldspar and biotite. There is twice as much feldspar as quartz. 10% of it is biotite. What percentage is feldspar?

TB How many square numbers have 3 digits?

Answers: Q1 MOTH Q2 70% Q3 SE Q4 11:20 p.m. Q5 400 Q6 S Q7 60% TB 22

1 Find the next number: 32, 48, 72, 108, 162, . . .

2 How many great great great . . . great grandparents (with 18 greats) did you have? Answer to the nearest whole power of 10.

3 Sarah ran 60 km in the first hour, 59 km in the second hour, 58 km in the third hour and so on following this pattern for 60 hours. Then she died. How far did she run before she died? Hint: How far did she run in the 1st and 60th hours combined?

4 A rectangular vegie garden has an area of 60 m^2 and a perimeter of 34 m. What is the length of its diagonal?

5 How many three-digit numbers contain no zeros?

6 What is 2 + 1 + 0.5 + 0.25 + 0.125 + . . . for ever?

7 What day of the week is Christmas Day 2090?

TB: How many square numbers have 4 digits?

Answers: Q1 243; Q2 10^6 or 1 000 000; Q3 1830 km; Q4 13 m; Q5 729; Q6 4 Q7 Monday TB: 68

1 Fred cycled the first 6 km at 24 km/h and the remaining 2 km at 20 km/h. How many minutes did the journey take?

2 A small tank holds 10^8 mm^3 of water. A large tank holds 10^{10} mm^3. How many small tanks of water would it take to fill a large tank?

3 If you toss a coin 6 times, what is the probability of getting 4 heads and 2 tails?

4 Find the next number:

2, 9, 28, 65, 126, 217, 344, 513, 730, . . .

5 Harriet has 4 hours to drive to her mother's place 360 km away. If she drives three quarters of the way there at 80 km/h, at what speed will she have to drive the last quarter?

6 How many numbers between 1 and 999 are multiples of 8?

7 What is the largest number of factors that a 2-digit number can have?

Tie Breaker: The two long sides of an isosceles triangle are each 4 cm longer than the short side. If its perimeter is 29 cm, how long is the short side?

Answers: Q1 21; Q2 100; Q3 $^{15}/_{64}$; Q4 1001; Q5 144 km/h; Q6 124; Q7 12; TB 7 cm;

1 Give the coordinates of the point where the lines $y = 2x + 4$ and $y = 10$ cross.

2 If the side lengths of a square are multiplied by 4, what is the area multiplied by?

3 The mean of four whole numbers is twice the mode. If the largest number is 9 and the range is 7, what is the median?

4 Jesse started work at 8:30 a.m. and worked until 7:15 p.m. with a half hour break. If he is paid, $11.60 per hour, how much would he earn?

5 Trees on a plantation are planted in a square pattern 5 m apart. How many trees can be planted per hectare?

6 How many degrees is each angles inside a regular pentagon?

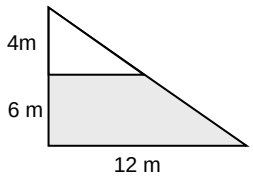
7 A rectangular garden bed is 4 m longer than it is wide. Its area is 165 m^2. What is its perimeter?

Tie Breaker: How many multiples of 50 have 3 digits?

Answers: Q1 (3, 10) Q2 16 Q3 2.5 Q4 $118.90 Q5 400 Q6 108 Q7 52 TB 18

1 $a = 4b - 17$ Find b if $a = 6b$

2 Find the shaded area.
(If lines look parallel and perpendicular, then they are.)



3 $1 - 3 + 5 - 7 + 9 - 11 + \ldots + 93 - 95 + 97 - 99 =$

4 Show how to cut a square into 7 smaller squares

5 $a + b = 9$ $a - b = 3$ $c + a = -1$ Find $a + b + c$

6 If the probability that two matchboxes will both land on their ends when dropped is 1%, find the probability that neither will.

7 $y = 2x + c$ passes through (3, 11) and (–2, a). Find the value of a.

TB: 26 1-cm squares are joined together to make a shape. Find the smallest possible perimeter.

Answers: Q1 –8.5 Q2 50.4 m^2 Q3 –50 Q4 - Q5 2 Q6 81% Q7 1 TB 22 cm

1 What is the size of each internal angle in a regular decagon?

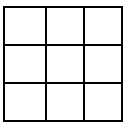
2 Harry has 0.7 m^3 of petrol. He wastes 220 L, then divides the rest between Tom and Dick in the ratio 3:5. How many litres more does Dick get than Tom?

3 If it is Monday on 16 July 2473, what day of the week will it be on 16 July 2480?

4 Find a positive solution to $2^x = x^2$

5 Minnie can row her boat in still water at 2 km/h. The river flows at 1 km/h. How many minutes will it take her to row 500 m upstream, then back again?

6 How many rectangles?



7 What must x be for the mean and median of these numbers to be the same?

4, 7, 7, 5, x, 11

Tie Breaker: Find, accurate to 2 decimal places, the perimeter of the triangle whose vertices are at (4, 3), (–1, 0) and (6, 0)

Answers: Q1 144° Q2 120 L Q3 Wed Q4 2 Q5 40 Q6 36 Q7 8; TB 16.44

1 Give the coordinates of the point where $y = 2x + 10$ crosses the x-axis.

2 If the side lengths of a square are increased by 20%, by what percentage will the area increase?

3 What is the probability of getting 3 or more heads if you toss 4 coins?

4 In a casino game, 4 coins are tossed. Players pay \$1. If 3 or more heads come up, the players are given \$4 back. In the long run, would you win or lose money playing this game?

5 What is the area of a right-angled isosceles triangle with two of its sides 2 m and $\sqrt{8}$ m long?

6 Angie and Margot are the same shape but different size. Angie is 150 cm and 48 kg. Margot is 175 cm. How much does Margot weigh to the nearest kilogram? (The answer is not 56 kg.)

7 If you put 5 letters in 5 envelopes at random, what is the probability that exactly 4 of them would be in the right envelope?

TB What is the smallest number with exactly 5 factors?

Answers: Q1 (–5, 0) Q2 44% Q3 $^5/_{16}$ Q4 win Q5 2 m^2 Q6 76 Q7 0 TB 16