

The 18xx games are in order of starting from p2 onwards. Railway Rivals RR2563ZM is on p8 & p9. Outpost M21 ends on p10. The Games That You Play is on p11. Solutions to the M530 Maths questions are on p12 & p13.

New Games: None. A new Outpost starts below. No other game looks like starting soon - based on the waiting lists - but that can quite easily change.



**RAILWAY UNDERTAKING.**

Touter. "GOING BY THIS TRAIN, SIR?" Passenger. "'M? Eh? Yes."  
Touter. "ALLOW ME, THEN, TO GIVE YOU ONE OF MY CARDS, SIR."

Usual suspects Dane & Steve responded to the Maths questions made available last time with expectedly complete success. Just in case any others are even remotely interested, the solutions provided by the Third Age Trust (u3a) are provided at the back of this issue.

Whilst risking losing myself down various rabbit holes in search of something to put on this page, I discovered that there is an archive of Punch cartoons. There is a link to search them [at this location](#).

I cursorily picked one out to occupy some of the space here. The text is small but indicates that a train journey of the time - 18 September 1852 - was regarded as a risky endeavour.

Railway Undertaking

Touter: Going by this train, Sir?

Passenger: 'M? Eh? Yes.

Touter: Allow me, then, to give you one of my cards, Sir.

Is the Surgery indicated on board the train? Also, I am not sure what object the touter is holding. But the message is clear.

**OUTPOST M22**

**START**

If you want to play in this here game then just send orders for next time.

As usual in Minstrel we will use the "Automated Start" facility (courtesy of Ian Pendlebury) whereby players automatically buy a Water Factory on the first turn and the second turn purchase is made dependent upon the cards you receive in the first round. The details are enclosed with the Minstrel 531 mailing. All players start with the same average cards - four 3 Ore and two 7 Water.

Please decide whether you like this automated start, which does save some time & thinking. If you don't want the automated start then please send me orders for how you want to handle rounds 1 & 2.

**OUTPOST M22 : EXPERT : STANDARD CARDS      NEXT – ROUNDS 1 & 2 [AUTOMATED OR BY ORDERS]**

<b>WAITING</b>	1829 SOUTH   NORTH	David H   David H
	1830	Tony S, Mark H
	1830 READING	Tony S
	1835	Graham L, John W
	1846	
	1856	Tony S, Graham Lee
	1861	
	1870	Mike B
	18EU	David H
	RAILWAY RIVALS	John W, Brad M
	ST. PETERSBURG	Brad M, John W

**DEADLINE: FRIDAY 22<sup>ND</sup> MAY 2026**

**HOST : ROB THOMASSON**

As advertised, we stop before SR9 by request. Next time I am perhaps optimistically asking to go through to OR18 - but only if there are no changes of presidency in SR9. Clear statements of intent for your building endeavours are a good thing and will be used to resolve uncertainty wherever possible.

**Operating Round 14**

	Dir	Lay	[Rep]	Base	Run	Pay	Quote	Credit	Trains	Notes
B&O	JS				280	Y	240B	224	6	
PRR	MB				480	Y	220B	1	D	
NYNH	MB				220	Y	225A	89	5	
RDR	DH				400	Y	170C	0	D	
C&O	TS	68:E5:3	[59]		190	Y	170C	140	6	
B&M	JS				220	Y	120D	29	5	
Erie	MB				220	Y	120D	169	5	
NYC	DH	59:D10:6			260	Y	100D	113	6	A
CPR	TS	67:D10:2	[59]		140	Y	82D	140	D	

**Operating Round 15**

	Dir	Lay	[Rep]	Base	Run	Pay	Quote	Credit	Trains	Notes
B&O	JS				280	Y	260B	224	6	
NYNH	MB				220	Y	250A	89	5	
PRR	MB	58:E7:6			490	Y	240B	1	D	
RDR	DH	8:C9:2			400	Y	185C	0	D	
C&O	TS				190	Y	185C	197	6	
B&M	JS				220	Y	130D	29	5	
Erie	MB				220	Y	130D	213	5	
NYC	DH	57:B10:2			260	Y	110D	165	6	
CPR	TS				140	Y	90D	140	D	

**Notes** A \$80 to Bank for a river

Tiles	1/0	2/1	3/2	4/1	7/2	8/0	9/3	14/0	15/0	16/1	18/1	19/1
	20/1	23/0	24/2	25/0	26/0	27/1	28/1	29/1	39/1	40/1	41/2	42/1
	43/0	44/1	45/2	46/2	47/1	53/2	54/1	55/1	56/0	57/2	58/0	59/2
	61/0	62/0	63/0	64/1	65/0	66/0	67/0	68/0	69/0	70/1		

**Trains** D/3(\$900)

Cash Flow	Start	OR14	OR15	End	Value	%	Certs	Max 17
Tony Sait	1,283	430	433	2,146	5,061	20.6	16 - 16	
David Hooton	1,908	636	638	3,182	6,592	26.8	17 - 17	
John Shelley	1,308	465	465	2,238	5,778	23.5	17 - 17	
Mike Bennett	1,674	618	623	2,915	7,155	29.1	17 - 17	

Portfolios	PRR	NYC	CPR	B&O	C&O	Erie	NYNH	B&M	RDR
Tony Sait	3	1	6P	-	6P	-	1	-	1
David Hooton	2	6P	-	2	-	-	1	3	6P
John Shelley *	-	1	1	6P	1	1	2	6P	1
Mike Bennett	5P	-	-	2	-	5P	6P	-	2
Bank New	-	-	3	-	-	2	-	1	-
Par	82	90	90	100	76	100	100	100	90
Bank Pool	-	2	-	-	3	2	-	-	-
Quote	240B	110D	90D	260B	185C	130D	250A	130D	185C
Credit	\$1	\$165	\$140	\$224	\$197	\$213	\$89	\$29	\$0
Tokens Left	1	2	3	1	1	1	-	-	-

The OR16 operating order is - B&O, NYNH, PRR, RDR, C&O, B&M, Erie, NYC, CPR - unless changed by SR9.

Many dividends are retained and we break into the 5 trains ...

### Operating Round 10

	Dir	Lay	[Rep]	Token	Run	Pay	Quote	Credit	Trains	Notes
LNWR	MR	14:M6:3	[1]	K9 - K6	220	N	160	170	3 (2 2) +4	A
GWR	SG	9:E6:3		E6 - E5	200	Y	112	400	3 (2 2)	
Mid	DH	12:I8:1	[3]	H7 - I8 =S	100	N	100	240	(3) +4	B A
LSWR	ED			D8 - D7	180	N	76	50	3 (2) +5	C D
GNR	MR	6:M5:5		M5 - M5 =S	90	N	71	100	3	E B
LBSC	SG	9:C11:3		C11 - D10	90	Y	67	370	3	
GER	DH	4:F10:1		F10 - G10	70	N	58	10	4 +3	F
GCR	ED	38:K8:1	[10]	M7 - L6	90	Y	61	180	4	

Notes	A	£430 to the Bank for a 4 Train	D	5 Train purchase starts Phase 3
	B	£40 to the Bank for a garrison	E	£40 to Bank for a river
	C	£550 to the Bank for a 5 Train	F	£170 to the Mid for a 3 Train

Tiles	1/2	2/2	3/2	4/4	5/4	6/2	7/3	8/5	9/5	10/1	12/0	13/3
	14/0	15/1	16/1	17/1	18/1	19/2	20/0	21/1	22/1	23/4	24/4	25/1
	26/2	27/2	28/0	29/1	30/1	31/1	32/1	33/1	34/1	35/1	36/1	37/1
	38/5	39/1	40/1	41/2	42/2	43/1	44/1	45/1	46/1	47/2		

Trains 5/3(£550) then 7/4(£720)

### Share Dealing Round 8

\* share from the pool

Mike Ruffhead	Shaun Goodwin	David Hooton	Edward Denley
+LBSC*	+GER*	+GWR*	+GNR*
+GNR*	+GER*	~	~
~	+GER*	[Totem]	

Cash Flow	Start	OR10	SDR8	End	Value	%	Certs	Max 18
Mike Ruffhead	144	5	-138	11	1,576	27.2	14 - 14	
Shaun Goodwin	30	173	-174	29	1,459	25.2	16 - 16	
David Hooton	113	55	-112	56	1,470	25.3	14 - 14	
Edward Denley	50	63	-71	42	1,296	22.3	15 - 15	

Portfolios	Privates	LNWR	GWR	Mid	LSWR	GNR	LBSC	GER	GCR
Mike Ruffhead	S&M	5D	-	1	-	8D	1	-	-
Shaun Goodwin	C&HP	-	5D	-	2	-	7D	3	-
David Hooton *	C&W	-	3	6D	-	-	-	6D	-
Edward Denley	-	-	-	3	6D	1	-	-	7D
Bank New	Hull	-	-	-	-	-	-	-	3
Bank Pool	L&M	5	2	-	2	1	2	1	-
Tokens Left		4	4	3	3	3	3	3	3

1829I46 : SOUTH GAME, MSK1, PC RULE : PHASE 3 : BANK - £19,862

NEXT TIME - OR11 & OR12

One train is purchased, and it makes a difference ...

**Operating Round 11**

	Dir	Lay	[Rep]	Base	Run	Pay	Quote	Credit	Trains	Notes
PrE	JW	219:G3:5	[213]		490	Y	236C	338	4+4 (3 3)	
ByE	GL	206:M9:4	[6]		230	Y	212C	141	4 (3)	
HeE	JS	217:J6:6	[210]		170	N	108B	19	3+3 +6	A B
SxE	JW	216:H20:2	[207]		440	Y	98F	298	5 3+3	B
BaE	TS	27:I5:5	[7]		330	Y	100C	479	4 3+3	B
WtE	GL	63:M9:1	[206]		350	Y	100C	36	5 4	B
MsE	JS	63:H16:1	[12]		290	Y	84D	0	5+5	

**Operating Round 12**

	Dir	Lay	[Rep]	Base	Run	Pay	Quote	Credit	Trains	Notes
PrE	JW	63:F14:1	[205]		250	Y	262C	338	4+4	
ByE	GL	24:M13:2	[9]		130	Y	236C	141	4	
HeE	JS				410	Y	120B	19	6 3+3	B
BaE	TS	7:H6:6			330	Y	110C	409	4 3+3	C B
WtE	GL	24:N14:4	[8]		370	Y	110C	36	5 4	B
SxE	JW				450	Y	106F	343	5 3+3	B
MsE	JS				300	Y	88D	0	5+5	

**Notes** A 600M to the Bank for a 6 Train C 70M to Bank for a mountain  
 B At Train Limit

**Tiles**

1/1	2/1	3/2	4/0	5/3	6/3	7/6	8/7	9/2	12/1	13/2	14/1
15/1	16/2	18/1	19/2	20/2	23/1	24/1	25/3	26/0	27/1	28/2	29/2
39/1	40/1	41/2	42/2	43/1	44/2	45/2	46/2	47/2	55/1	56/0	57/1
58/1	63/0	69/2	70/1	87/0	88/2	201/2	202/2	203/1	204/2	205/1	206/1
207/2	208/1	209/1	210/1	211/1	212/1	213/1	214/1	215/1	216/0	217/1	218/2
219/0	220/0	221/0									

**Trains** 6/1(600M) then 6+6/4(720M)

**Cash Flow**

	Start	OR11	OR12	End	Value	%	Certs	Max
John Webley	572	558	420	1,550	3,758	22.1	12	15
John Shelley	466	369	792	1,627	3,923	23.0	17	17
Tony Sait	983	587	509	2,079	4,678	27.5	16	16
Graham Lee	345	573	475	1,393	4,664	27.4	16	17

**Portfolios**

	PrE	ByE	SxE	BaE	WtE	HeE	MsE	OIE
John Webley	60/7D	-	60/5D	-	-	-	-	-
John Shelley	-	-	10/1	-	10/1	100/8D	100/7D	-
Tony Sait *	25/3	20/2	20/2	100/8D	-	-	-	20/1D
Graham Lee	15/2	80/7D	-	-	90/7D	-	-	-
Bank New	-	-	-	-	-	-	-	80/6
Bank Pool	-	-	10/1	-	-	-	-	-
Quote	262C	236C	106F	110C	110C	120B	88D	
Credit	338M	141M	343M	409M	36M	19M	0M	
Tokens Left	2	3	1	1	-	-	-	1

The OR13 operating order is - PrE, ByE, HeE, BaE, WtE, SxE, MsE - unless changed by SR8.

Mark is the president elect of the TGB and Graham (acting as John S) takes on the WR ...

Stock Round 6

\* share from the pool

John Webley	Mark Hancock	John Shelley	Mike Bennett
-GW(175),+CV(100)	-WR/3(240),+TGB/P(200)	-LPS/2(300),+GT(100)	+CPR*(100)
+CV(100)	+TGB(100)	+GT(100)	+CPR*(100)
+CV(100)	+TGB(100)	+GT(100)	+CA(100)
~	~	+GT*(110)	~
~	~	+CV(100)	~
~	~	+CA(100)	~
~	~	+CA(100)	~
~	~	-GW(150),+CA(100)	[Priority]

Cash Flow	Start	SR6	End	Value	%	Certs Max 16
Mike Bennett	341	-300	41	1,691	27.5	13 - 13
John Webley	206	-125	81	1,231	20.0	9 - 9
Mark Hancock	187	-160	27	1,257	20.4	9 - 9
John Shelley	551	-360	191	1,976	32.1	15 - 15

Portfolios	BBG	CA	CPR	CV	GT	GW	LPS	TGB	THB	WR	WGB
Mike Bennett *	-	1	2	6P	-	-	6P	-	-	-	-
John Webley	-	6P	-	3	-	2P	-	-	-	-	-
Mark Hancock	-	-	-	-	5P	1	-	4P	-	1	-
John Shelley	-	3	6P	1	5	-	-	-	-	2P	-
Bank New	10P	-	-	-	-	5	-	6	10P	2	10P
Par		100	80	100	100	90	75	100		65	
Bank Pool	-	-	2	-	-	2	4	-	-	5	-
Quote		100A	100E	100A	125A	125D	125E	100A		80F	
Credit		\$430	\$225	\$690	\$114	\$180	\$0			\$36	
Loans		0	500	0	0	300	700			600	
Trains		5	4 4	5	5 4	3	4 3			3 3	
Tokens Left	2	2	2	2	2	2	-	1	1	2	1

Rights Held by ShareCos : GW - Tunnel | LPS - Tunnel | WR - Bridge.

Tiles	1/1	2/0	3/2	4/3	5/2	6/2	7/6	8/13	9/6	14/2	15/2	16/1
	17/1	18/1	19/1	20/1	23/3	24/3	25/1	26/1	27/1	28/1	29/1	39/1
	40/1	41/3	42/3	43/2	44/1	45/2	46/2	47/2	55/1	56/1	57/3	58/2
	59/2	63/3	64/1	65/1	66/0	67/1	68/1	69/1	70/1	120/1	121/2	122/0
	125/2	126/0	127/0									
Trains	3/1(\$225)		6/2(\$700)		then	D/9(\$1,100)						

The OR10 operating order is - LPS, GW, GT, CPR, CA, CV, WR.

Brisk dealing that leads to three new companies ... so just the one OR next time ...

Stock Round 5

\* share from the pool

John Webley	Mike Bennett	Andy Muir	Mike Ruffhead
+B&O(90)	-B&O(111),-PRR(63), +NYC/P(180)	-B&O(100),-NYNH(90), +Erie/P(180)	+CPR/P(200)
+PRR*(60)	+NYC(90)	+Erie(90)	+CPR(100)
~	+NYC(90)	+Erie(90)	+CPR(100)
~	+NYC(90)	+Erie(90)	+CPR(100)
~	+NYC(90)	+Erie(90)	-PRR/2(120),+CPR(100)
~	-NYC(90),+C&O(82)	[Priority]	

Cash Flow	Start	SR5	End	Value	%	Certs	Max 16
Mike Bennett	388	-358	30	1,020	25.4	10 - 10	
Andy Muir	360	-350	10	1,000	24.9	9 - 9	
Mike Ruffhead	507	-480	27	1,017	25.3	8 - 10	
John Webley	252	-150	102	982	24.4	8 - 9	

Portfolios	Privates	PRR	NYC	CPR	B&O	C&O	Erie	NYNH	B&M
Mike Bennett	-	-	5P	-	-	1	-	6P	-
Andy Muir *	-	-	-	-	5P	-	6P	-	-
Mike Ruffhead	-	3P	-	6P	1	1	-	1	-
John Webley	D&H	1	-	-	1	6P	-	1	-
Bank New	-	3	4	4	1	2	4	1	10P
Par		71	90	100	90	82	90	76	
Bank Pool	-	3	1	-	2	-	-	1	-
Quote		40J	82C	100A	90E	100D	90B	80F	
Credit		\$0	\$900	\$1,000	\$46	\$180	\$900	\$0	
Trains		4			3 3 3	4 3		4 3	
Tokens Left		2	3	3	1	2	2	1	1

Privates Owned by ShareCos : PRR - CStL, C&A | B&O - SVR | NYNH - M&H.

Tiles	1/0	2/1	3/2	4/2	7/3	8/6	9/5	14/2	15/0	16/1	18/1	19/1
	20/1	23/2	24/3	25/1	26/1	27/1	28/1	29/1	53/1	54/0	55/1	56/0
	57/2	58/2	59/2	69/0								
Trains	4/1(\$300)		then	5/3(\$450)	6/2(\$630)	D/6(\$1,100)						

The OR6 operating order is - C&O, CPR, B&O, Erie, NYC, NYNH, PRR.

For next time I have asked to go through to SDR5. But we will stop after SD4 if there is a change of director in SDR4 - other than the flotation of the Midland. But do let me know if you would like to stop after SDR4 in any case and/or if the Midland is floated therewithin.

**Operating Round 1**

	Dir	Lay	[Rep]	Token	Run	Pay	Quote	Credit	Trains	Notes
LNWR	DH			Q11 - P10			90	820	+2	A
NER	SG	5:L14:1		L14 - K13			82	720	+2	A

**Notes** A £180 to the Bank for a 2 Train

**Share Dealing Round 2**

\* share from the pool

Mike Ruffhead	David Hooton	Shaun Goodwin	Edward Denley
~	~	+NER	[Totem]

**Operating Round 2**

	Dir	Lay	[Rep]	Token	Run	Pay	Quote	Credit	Trains	Notes
LNWR	DH	9:P10:1		P10 - Q9	50	Y	100	780	2	A
NER	SG	9:K13:4		K13 - J12			76	720	2	

**Notes** A £40 to Bank for a river

<b>Tiles</b>	1/2	2/2	3/2	4/6	5/3	6/4	7/4	8/8	9/8
<b>Trains</b>	2/5(£180)	then	3/6(£300)	4/4(£430)	5/4(£550)	7/4(£720)			

**Share Dealing Round 3**

\* share from the pool

[No Dealing]

Cash Flow	Start	OR1	SDR2	OR2	SDR3	End	Value	%	Certs	Max 18
David Hooton	20	5	0	25	0	50	632	24.8	6 - 6	
Shaun Goodwin	85	10	-90	20	0	25	604	23.7	6 - 6	
Edward Denley	30	15	0	25	0	70	628	24.7	6 - 6	
Mike Ruffhead	220	20	0	30	0	270	680	26.7	3 - 3	

Portfolios	Privates	LNWR	NER	Mid	NBR	Cal	L&YR	GNR	GCR
David Hooton	A&F	4D	2	-	-	-	-	-	-
Shaun Goodwin	C&HP	2	4D	-	-	-	-	-	-
Edward Denley *	S&D	2	3	-	-	-	-	-	-
Mike Ruffhead	L&M	2	-	-	-	-	-	-	-
Bank New	Hull	-	1	10D	10D	10D	10D	10D	10D
Bank Pool	-	-	-	-	-	-	-	-	-
Tokens Left	4	4	4	3	3	3	3		

1829T46 : NORTH, MSK1, PC RULE : PHASE 1 : BANK - £19,585

NEXT - OR3, SDR4, OR4 &amp; SDR5

ZRR opens up a gap at the front before the last round. DHAN ran well but had only 3 races. GITCO & GRAZ had greater payments.

Company Run	DHAN Brad M - Brown	ZRR Mike R - Red	GITCO Tony S - Blue	GRAZ John W - Green
11.1 (11) Nchelenge - Pitauke (25)				
11.2 (15) Kasama - Kasempa (45)		10 -2/GIT +3/GIT 37	20 -3/Tx -3/Z +2/Z 24	
11.3 (21) Mansa - Ndola (35)			20 -3/Tax +1/GRA 7	10 -3/Tax -1/GIT 9
11.4 (43) Mongu - Lusaka (65)	10  27	20  18		
11.5 (56) Kabwe - Kitwe (34)	20 +1/GRA 6			10 -1/DHA 6
11.6 (66) Lusaka - Tanzania [Mbala   Nakonde] {S5}		20 -3/GRA 27 [Nakonde]	10 -3/Tax +1/GRA 28 [Mbala]	0 -3/T -1/GI +3/Z 27 [Mbala]
11.7 (S3) Botswana   Zimbabwe [L32   Livingstone   Z27] - Mumbwa [55]	5 -1/Z +1/Z +1/GI +2/GR [Livingstone] 13	0 -1/D +1/D +3/GR [Livingstone] 13	5 -1/DHA [Livingstone] 11	20 -2/DH -3/ZR [Livingstone] 13
<b>Total Points Gained</b>	<b>39</b>	<b>51</b>	<b>46</b>	<b>29</b>

In the run results chart above, the first line shows the race result points, the second line shows the payments from and to other players, and the last line shows the run length along with the choice(s) of endpoint (where they existed). Joint Runs and Exchanges Of Running Powers will also be noted on the first line. In all instances abbreviations may be deployed.

**Builds & Scores**

DHAN - Brown    No Builds  
Brad Martin    Points: 286 = 247 +39/Runs

ZRR - Red        No Builds  
Mike Ruffhead   Points: 308 = 257 +51/Runs

GITCO - Blue    No Builds  
Tony Sait        Points: 227 = 181 +46/Runs

GRAZ - Green    No Builds  
John Webley     Points: 252 = 223 +29/Runs

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**Round 12 Runs** - Enter 11.1 plus up to 4 others

- 11.1 (11) Nchelenge - Pitauke (25)
  - 12.1 (12) Mbala - Mozambique | Malawi [L56 | Chipata | Lundazi | P46] (S4)
  - 12.2 (14) Luwingu | Isoka - Ndola (36)
  - 12.3 (24) Serenje - Airports [Solwezi | Ndola | Lusaka | Livingstone | Mbala | Chipata] (S6)
  - 12.4 (26) Chipata - Monze (26)
  - 12.5 (31) Mufulira - Mwinilunga | Zambezi (41)
  - 12.6 (42) Kabompo | Kalabo - Livingstone (53)
  - 12.7 (54) Livenigstone - Lusaka (64)
- 

**Building Allowances & Run Length**

The minimum run length is 6 hexes.

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Mike duly wins the game (despite a notably below par production - a fate that had hit other players during the game). Any comments received will be printed next time.

Meanwhile, a new Outpost is announced on the first page.

**Round 16 Actions**

Mike Auctored a Space Station for 120. Tony joined at 121. Bids incremented by one until Tony got it for 131 (w:30 r:13,13,13 m:16,16 om:30)

Mike Auctored a Space Station for 120 and got it for 120 (w:4,4,5,6 t:13,44,44)

Mike Bought one Titanium Factory (ro:30)

Mike Bought six Population Units (ro:35)

David Auctored a Moon Base for 200. Dane joined at 201 and got it for 201 (w:30 t:44 r:14 m:14,17,18,20 n:14 om:30)

David Auctored a Moon Base for 200 and got it for 200 (o:1 w:7,9,30 r:11,12,14,14,17 m:17 n:18 mo:50)

David Bought two Population Units (w:4 r:16)

David Bought one Robot (r:10)

John Auctored an Outpost for 100 and got it for 100 reduced to 90 after Ecoplants discounts (o:2 w:30 t:7 r:10,13,14,14) plus a free Titanium Factory

John Bought one Population Unit (w:7)

Tony Bought one Robot (t:10)

Dane Bought two Robots (t:11 r:11)

Mick Bought two Titanium Factories (o:5,5 w:8 t:8 r:12 n:22)

Mick Bought four Robots (o:3 w:7,30)

Tony Discarded o:1 o:3 o:3

Pos	Player	Factories	Operators (Limits)	Production	Total
1	Mike	2o,3w,10t	20 (21) 0 (0)	2o,3w,2t,2T,1om,2ro	(245,20)
2	David	2o,6w,5r,1n	10 (10) 6 (10)	2o,3w,1W,5r,1m,1n,2mo	(259,15)
3	Dane	2o,4w,4t,1n	5 (7) 7 (5)	3w,1T,1r,2m,1n,1om,1mo	(212,15)
4	Tony	2o,4w,2t	8 (10) 2 (8)	1o,1W,3t,3r,1m,2om	(179,10)
5	John	2o,4w,2t,3r	11 (15) 0 (0)	3o,1W,3t,3r	(108,20)
6	Mick	2o,6w,3t,1n	8 (8) 7 (8)	2o,2w,1W,4t,1r,1n	(123,20)

Pos	Player	Colony Cards	VPs	Purchases
1	Mike	HE, Nod, Eco, OP, OP, SS, PC, PC	83	(725)
2	David	WH, Nod, OL, Rob, Lab, MB, MB	75	(630)
3	Dane	WH, HE, Sci, OL, OL, Rob, SS, MB	57	(565)
4	Tony	DL, HE, Nod, Sci, Sci, OL, Rob, Eco, SS, SS	49	(520)
5	John	DL, DL, DL, Lab, Lab, Lab, Eco, OP, OP	49	(515)
6	Mick	WH, WH, HE, Nod, Sci, Rob, Eco	32	(225)

Andy Muir	1830R46
Brad Martin	RR2563ZM
Dane Maslen	Outpost M21
David Hooton	1830E46, 1829I46, 1829T46
David Smith	Outpost M21
Edward Denley	1829I46, 1829T46
Graham Lee	1835K46, 1856M46
John Shelley	1830E46, 1835K46, 1856M46
John Webley	1830E46, 1835K46, 1856M46, 1830R46, RR2563ZM, Outpost M21
Mark Hancock	1856M46
Mick Haytack	Outpost M21
Mike Bennett	1830E46, 1856M46, 1830R46
Mike Ruffhead	1829I46, 1835K46, 1830R46, 1829T46, RR2563ZM, Outpost M21
Shaun Goodwin	1829I46, 1829T46
Tim Parkes	
Tony Sait	1830E46, 1835K46, RR2563ZM, Outpost M21

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**Question 1**

Find a two-digit number such that:

- The sum of its digits is **10**
- Reversing the digits increases the number by **36**

**Solution**

Let the digits of the number be  $ab$

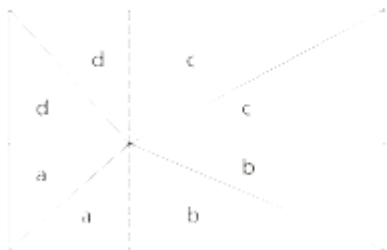
Then,  $10b + a = (10a + b) + 36$  i.e.,  $9b = 9a + 36$  or,  $b = a + 4$

$10 = a + b = a + (a + 4) = 2a + 4$  so,  $a = 3$ ,  $b = 7$

The two-digit number is 37

**Question 2**

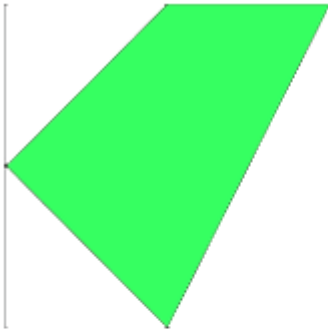
This rectangle has been divided into four triangular areas. The area of three of these is shown in the diagram; what is the area of the fourth?

**Solution**

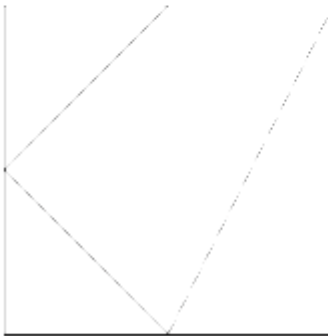
Dividing each triangle into two to produce four pairs of triangles of areas  $a$ ,  $b$ ,  $c$  and  $d$ , we require  $a + d$ .

We know that  $a + b = 10$ ,  $b + c = 18$  and  $c + d = 20$

So,  $a + d = (a + b) - (b + c) + (c + d) = 10 - 18 + 20 = 12$

**Question 3**

What fraction of the square is occupied by the central quadrilateral which has three of its vertices at midpoints of the sides of the square?

**Solution**

The dotted lines illustrate that the three outer triangles are  $\frac{1}{8}$ ,  $\frac{1}{8}$  and  $\frac{1}{4}$  the area of the square, so the area of the central quadrilateral is  $\frac{1}{2}$  of the area of the square.

**Question 4**

The eight-digit number " $aaaabbbb$ ", where  $a$  and  $b$  are digits, is a multiple of 45. What are the possible values of  $a$ ,  $a \neq 0$ ?

**Solution**

Every multiple of 45 is a multiple of both 5 and 9 so, applying the usual rules of divisibility by 5 and 9 to the number, we can deduce that:

$b = 0$  or  $b = 5$  and that  $4a + 4b$  is a multiple of 9.

In the case  $b = 0$ ,  $4a$  and so  $a$  is a multiple of 9, hence  $a = 9$ .

In the case  $b = 5$ ,  $4a + 20$  and so  $a + 5$  is a multiple of 9, hence  $a = 4$ .

There are two possible numbers: 99 990 000 and 44 445 555.