

Answers: missions 1 to 4

1 · Pizza Turbo

A a) $70 + 28 = 98$ · b) ones 8; $60 + 48 = 108$
 c) $90 + 54 = 144$ · d) $80 + 24 = 104$
 B a) $120 - 6 = 114$ · b) $160 - 8 = 152$ · c) $180 - 9 = 171$

Typical mistake: multiplying only the ones and forgetting the ten. 14×7 is not $4 \times 7 + 10 = 38$.

2 · Delivery HQ

×	4	7	9
12	48	84	108
15	60	105	135
17	68	119	153
18	72	126	162

B a) 17 · b) 8 · c) 7 · d) 9 ·
 e) 6 · f) 19

Check with multiplication:
 $15 \times 9 = 135$, $16 \times 6 = 96$,
 $19 \times 9 = 171$.

C Wrong are No. 2: $14 \times 6 = 84$; No. 5: $16 \times 7 = 112$; No. 7: $15 \times 8 = 120$.

D $11 \times 17 = 187$ · $14 \times 15 = 210$ · $16 \times 12 = 192$
 · $13 \times 14 = 182$

Where the mistakes come from: $14 \times 6 = 60 + 24 = 84$ (forgot the ten when adding). 16×7 : 10×7 is 70, not 60. $15 \times 8 = 80 + 40 = 120$.

3 · Square Gardens

1	2	3	4	5	6	7	8	9	10
1	4	9	16	25	36	49	64	81	100
11	12	13	14	15	16	17	18	19	20
121	144	169	196	225	256	289	324	361	400

B Jumps +33, +35, +37, +39; square numbers 289, 324, 361, 400. The jumps always grow by 2.

C $196 = 14 \times 14$ · $289 = 17 \times 17$ · $361 = 19 \times 19$

d) 289 ($300 - 289 = 11$, but $324 - 300 = 24$)

e) No. $15 \times 15 = 225$ and $16 \times 16 = 256$ are square numbers next to each other. 250 is between them, so no number times itself makes 250.

D a) 13, because $13 \times 13 = 169$ · b) $225 - 169 = 56$ seedlings

4 · Island Survey

A

Job	Tally	Number
Pizza delivery		9
Ice cream sales		7
Taxi driving		3
Fishing		6
Fire rescue		5
Total		30

B Bar heights: pizza 9, ice cream 7, taxi 3, fishing 6, fire rescue 5 squares.

1. Pizza delivery · 2. $9 - 3 = 6$ · 3. Taxi and fishing ($3 + 6 = 9$)

Common mistakes: letters counted twice or not at all. So always check: total = 30. In a group of five, the line across is the fifth mark, not a sixth.

Answers: missions 5 to 7

5 · High Score Board

A Number before | number | number after:

598 | 599 | 600

3,999 | 4,000 | 4,001

10,908 | 10,909 | 10,910

7,099 | 7,100 | 7,101

19,998 | 19,999 | 20,000

B $3,099 < 3,909$ · $45,600 > 45,060$ · $8,001 > 7,999$ · $12 \times 9 > 100$ · $13 \times 13 < 170$ · $70,070 < 70,700$
($12 \times 9 = 108$ and $13 \times 13 = 169$)

C $3,048 < 3,084 < 3,408 < 3,480 < 3,840$

D One small step is $100 \div 5 = 20$.

A = **60** · B = **240** · C = **380** · D = **460**

140: two small marks after 100. 320: one small mark after 300.

Trap: the number before 4,000 is 3,999, not 3,000 or 4,999. The number before 19,999 is 19,998.

6 · Rounding Radar

Number	Ten	Hundred	Thousand
4,352	4,350	4,400	4,000
7,865	7,870	7,900	8,000
2,996	3,000	3,000	3,000
15,049	15,050	15,000	15,000

B a) smallest **345**, greatest **354** · b) smallest **1,950**, greatest **2,049**

C 1. nearest **hundred** · 2. **12,000** · 3. nearest **ten**

2,996 to the nearest ten: the digit to the right is 6, so round up. 99 becomes 100, so 3,000. 15,049 to the nearest hundred is 15,000, not 15,100: don't round in steps!

7 · Boss-Level

A

$16 \times 7 = \mathbf{112}$	$19 \times 4 = \mathbf{76}$	$14 \times 14 = \mathbf{196}$
$12 \times 9 = \mathbf{108}$	$18 \times 8 = \mathbf{144}$	$17 \times 17 = \mathbf{289}$
$15 \times 6 = \mathbf{90}$	$13 \times 7 = \mathbf{91}$	$120 \div 15 = \mathbf{8}$
$12 \times 15 = \mathbf{180}$	$153 \div 17 = \mathbf{9}$	$18 \times 18 = \mathbf{324}$

B a) Wobbi $8 \times 14 = \mathbf{112}$, Pixel $9 \times 13 = \mathbf{117}$.

Pixel earns **5** coins more.

b) $112 + 117 = \mathbf{229}$ coins. $250 - 229 = \mathbf{21}$.

Answer: They don't have enough. They still need **21** coins.

C 1. **140** · 2. **Tuesday** · 3. $60 + 90 + 140 + 110 + 180 = \mathbf{580}$ · 4. $580 \approx \mathbf{600}$

D Square numbers between 300 and 400: 324 (digit sum 9) and 361 (digit sum 10). Answer: **361**.

Mistake guide

- **Times table mistakes** in the speed round: redo missions 1 and 2, then 5 minutes of speed round every day.
- **Square numbers** shaky: cover the table from mission 3 and say them out loud until 11^2 to 20^2 stick.
- **Graph** misread: first figure out what one square or one line stands for.
- **Ordering, rounding**: compare numbers place by place from the left. When rounding, look only at the one digit to the right.

For grown-ups: ask the child to explain how they worked it out first. A correct strategy with a small slip is a good step. Word problems need an answer sentence, as in mission 7 B.