

Year 6 Maths
Week 15 Lesson 4
Decimals – Division to Solve



Problem Solving 1

Gary thinks that he should calculate $£6.75 \div 12$ to solve this problem. Is he correct? Explain your thinking and solve the problem.

The local scout group are hosting a party. There are 12 scouts altogether. They all have to pay a small amount towards the party. Nine scouts have paid so far. In total, they have £6.75. How much does each scout have to pay?

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He is incorrect. He should calculate $£6.75 \div 9$ which means each scout has paid 75p to attend the party.

Reasoning 1

Edith has written the following comparisons.

A $23.43 \div 3 = 62.48 \div 8$

B $1.75 \div 5 > 2.16 \div 6$

C $17.2 \div 4 < 21.5 \div 5$

Is she correct?

Find and explain any errors.

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She is incorrect because...

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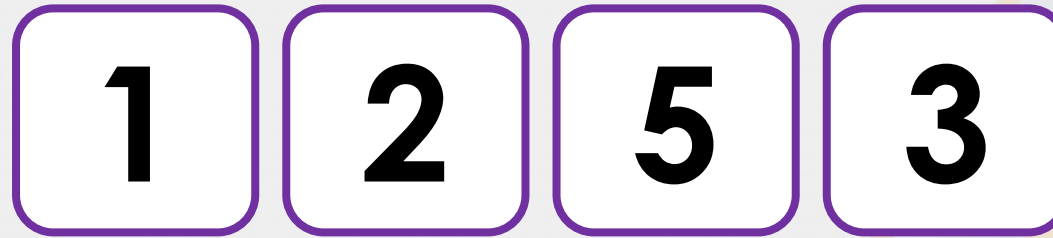
Is she correct?

Find and explain any errors.

She is incorrect because the answer for B should be $0.35 < 0.36$. The answer for C should be $4.3 = 4.3$. A is correct because both equal 7.81.

Problem Solving 2

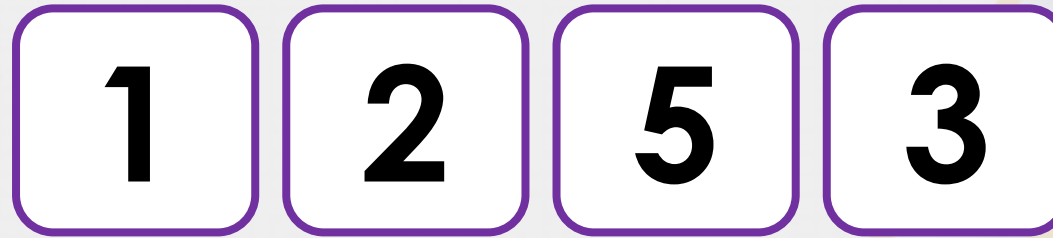
Use the digit cards to complete the calculation.



$$\square 7 \div 4 = 4. \square \square$$

Problem Solving 2

Use the digit cards to complete the calculation.



$$\boxed{1} \ 7 \div 4 = 4. \ \boxed{2} \ \boxed{5}$$

Main Tasks – part i

Level 1

1a. Lex thinks that he should calculate $£4.26 \div 4$ to solve this problem. Is he correct? Explain your thinking and solve the problem.

Mark, Kim and Jo share a meal deal which costs £4.26. How much do they pay each?



PS

2a. Tom has written the following comparisons.

A $22.4 \div 7 = 15.5 \div 5$

B $3.9 \div 3 < 6.18 \div 6$

Is he correct?
Find and explain any errors.



R

Level 2

4a. Jake thinks that he should calculate $5 \div £7.80$ to solve this problem. Is he correct? Explain your thinking and solve the problem.

A pack of fruit drinks contains 5 bottles. The whole pack costs £7.80. What does one bottle cost?



PS

5a. Dara has written the following comparisons.

A $301 \div 7 = 126 \div 3$

B $93.5 \div 5 < 74.4 \div 4$

C $184 \div 8 > 144 \div 6$

Is he correct?
Find and explain any errors.



R

Level 3

7a. Fiaz thinks that he should calculate $87.48 \div 12$ then divide the answer by 9. Is he correct? Explain your thinking and solve the problem.

A chocolate company is working out its costs. A multi-pack of chocolate boxes costs £87.48. Each multi-pack contains nine boxes and each box contains 12 luxury chocolates. How much does each chocolate box and each chocolate cost?



PS

8a. Armani has written the following comparisons.

A. $14 \div 8 = 10.5 \div 6 > 12.81 \div 7$

B. $129 \div 12 > 93.61 \div 11 = 76.59 \div 9$

C. $109.9 \div 7 < 136.8 \div 9 > 181.2 \div 12$

Is he correct?
Find and explain any errors.



R

Main Tasks – part ii

Level 1

3a. Use the digit cards to complete the calculation.



$$\square\square \div 2 = \square . 5$$



PS

Level 2

6a. Use the digit cards to complete the calculation.



$$\square\square \div 4 = 4 . 7 \square$$



PS

Level 3

9a. Use the digit cards to complete the calculation. The divisor is less than 5.



$$\square\square \div \square = \square . \square\square$$



PS

Developing

1a. He is incorrect. He should calculate $£4.26 \div 3$ which means they pay £1.42 each.

2a. A is incorrect: $3.2 > 3.1$

B is incorrect: $1.3 > 1.03$

3a. $19 \div 2 = 9.5$

Expected

4a. He is incorrect. He should calculate $£7.80 \div 5$ which equals £1.56 per bottle.

5a. A is incorrect: $43 > 42$

B is incorrect: $18.7 > 18.6$

C is incorrect: $23 < 24$

6a. $19 \div 4 = 4.75$

Greater Depth

7a. He is incorrect. He should calculate $£87.48 \div 9$ then divide the answer £9.72 by 12. This means each chocolate box costs £9.72 and each chocolate costs 81p.

8a. A is incorrect: the second calculation should be $1.75 < 1.83$

B is correct.

C is incorrect: the first calculation should be $15.7 > 15.2$

9a. $39 \div 4 = 9.75$

Here are the answers. How did you do?

There's going to be two more pages of questions. If you made some mistakes then great! Mistakes are brilliant as we remember them and learn from them.

The following questions are similar to the previous ones, so apply what you learnt from the previous ones.

You may also want to move up a level if you're feeling confident.

Main Tasks – part iii

Level 1

1b. Gem thinks that she should calculate $£47.60 \div 3$ to solve this problem. Is she correct? Explain your thinking and solve the problem.

Liam and 3 friends have collected $£47.60$ by washing cars for their neighbours. If they share the money equally, how much will each take home?



PS

2b. Amy has written the following comparisons.

A $24.8 \div 2 = 36.6 \div 3$

B $50.5 \div 5 > 40.8 \div 4$

Is she correct?
Find and explain any errors.



R

Level 2

4b. Sanna thinks that she should calculate $4.50 \div 6$ to solve this problem. Is she correct? Explain your thinking and solve the problem.

Alex cooks for 4.5 hours and makes 6 large pies. How long does one pie take to make?



PS

5b. Amelie has written the following comparisons.

A $42.8 \div 4 > 64.8 \div 6$

B $271.8 \div 9 > 241.6 \div 8$

C $43.05 \div 5 < 60.27 \div 7$

Is she correct?
Find and explain any errors.



R

Level 3

7b. Benji thinks that he should calculate $£3.97 \div 7$ then subtract the answer from $£20$. Is he correct? Explain your thinking and solve the problem.

Luke posts 7 parcels. The postage costs the same for each parcel. He pays with a $£20$ note and gets $£3.97$ change. How much does each parcel cost to post?



PS

8b. Katie has written the following comparisons.

A. $38.4 \div 12 > 16 \div 5 > 39.71 \div 11$

B. $13.5 \div 2 > 75.35 \div 11 = 82.2 \div 12$

C. $87.9 \div 6 = 131.85 \div 9 > 118 \div 8$

Is she correct?
Find and explain any errors.



R

Main Tasks – part iv

Level 1

3b. Use the digit cards to complete the calculation.



$$3 \square \div 2 = 1 \square . \square$$



PS

Level 2

6b. Use the digit cards to complete the calculation.



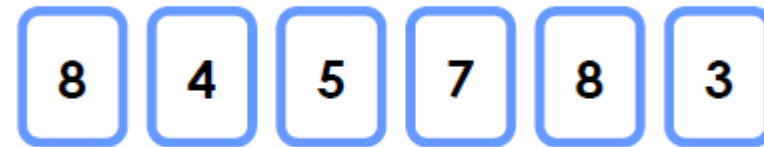
$$\square . \square \div 5 = \square . 3 6$$



PS

Level 3

9b. Use the digit cards to complete the calculation. The divisor is greater than 6.



$$\square \square \div \square = \square . \square \square$$



PS

Developing

1b. She is incorrect. She should calculate $£47.60 \div 4$ which means they each take home $£11.90$.

2b. A is incorrect: $12.4 > 12.2$

B is incorrect: $10.1 < 10.2$

3b. $37 \div 2 = 18.5$

Expected

4b. She is correct. 4.5 and 4.50 are the same. So $4.50 \div 6 = 0.75$ hours or 45 minutes to make each pie.

5b. A is incorrect: $10.7 < 10.8$

B is incorrect: $30.2 = 30.2$

C is correct: $8.61 = 8.61$

6b. $6.8 \div 5 = 1.36$

Greater Depth

7b. He is incorrect. He should calculate $£20.00 - £3.97$ then divide the answer by 7. This means all seven parcels cost $£16.03$ to post. $£16.03 \div 7 = £2.29$ to post each parcel.

8b. A is incorrect: $3.2 = 3.2 < 3.61$

B is incorrect: the first calculation should be $6.75 < 6.85$

C is incorrect: the second part of the calculation should be $14.65 < 14.75$

9b. $38 \div 8 = 4.75$

Well done!

If there's anything you are still unsure of from today's lesson please contact your teacher.