

Reasoning and Problem Solving Estimate and Approximate

Developing

1a. Various answers (depending on what the children choose to round to), for example: Taron's answer is likely to be incorrect because (when rounding to the nearest 100) an approximate answer to the calculation is $1,200 + 500 = 1,700$, but Taron's answer would round to 1,600.

2a. 7 counters.

3a. Ibrahim is correct because 73 rounds down to 70. $200 - 70 = 130$.

Expected

4a. Various answers (depending on what the children choose to round to), for example: Rocco's answer is likely to be incorrect because (when rounding to the nearest 1,000) an approximate answer to the calculation is $44,000 - 17,000 = 27,000$, but Rocco's answer would round to 36,000.

5a. 23 counters.

6a. Jackson is incorrect because £14.79 rounds up to £15. $£70 - £15 = £55$, not £45.

Greater Depth

7a. Various answers (depending on what the children choose to round to), for example: Sean's answer is likely to be correct because (when rounding to the nearest 1,000) an approximate answer to the calculation is $28,000\text{m} + 8,000\text{m} = 36,000\text{m}$, and Sean's answer would round to 36,000m.

8a. 391 coins.

9a. Max is correct because $9\frac{3}{4}$ km rounds up to 10,000m. $20,000\text{m} - 10,000\text{m} = 10,000\text{m}$.

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1b. Various answers (depending on what the children choose to round to), for example: Rachel's answer is likely to be correct because (when rounding to the nearest 1,000) an approximate answer to the calculation is $4,000 - 2,000 = 2,000$, and Rachel's answer would round to 2,000.

2b. 23 counters.

3b. Sonya is incorrect because 1,856 rounds up to 2,000. $2,000 + 2,000 = 4,000$, not 3,000.

Expected

4b. Various answers (depending on what the children choose to round to), for example: Emily's answer is likely to be correct because (when rounding to the nearest 10,000) an approximate answer to the calculation is $30,000 + 10,000 = 40,000$, and Emily's answer would round to 40,000.

5b. 84 coins.

6b. Esther is correct because 17,750 rounds up to 20,000. $80,000 - 20,000 = 60,000$.

Greater Depth

7b. Various answers (depending on what the children choose to round to), for example: Seren's answer is likely to be incorrect because (when rounding to the nearest 100) an approximate answer to the calculation is $53,500\text{m} - 9,800\text{m} = 43,700\text{m}$, but Seren's answer would round to 49,900m.

8b. 17 pieces of rope.

9b. Olivia is incorrect because £244.89 rounds up to £245. $£290 - £245 = £45$, not £35 (3,500p).