1.9 Fractions: Adding and Subtracting: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Olivia cycles 2 1/2 km before breakfast and 3 3/4 km after school. How far does she cycle in total? Give your answer as a mixed number.

(3)

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2 Simplify fully: (3/4 + 2/3) - (5/12).

(3)

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3 Work out 3/4 + 1/10.
Give your answer in its simplest form.

(2)

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4 Write 19/3 as a mixed number.

(1)

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5 A class collects 3/4 kg of food, 5/6 kg of supplies and 2/3 kg of clothing. Find the total weight collected. Give your answer as a mixed number in simplest form if necessary.

(4)

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6 Write 3/4 with denominator 20.

(1)

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7 Calculate and simplify where possible: 1/4 + 1/8.

(1)

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8 A runner covers 3 1/2 km on Monday and 2 3/4 km on Tuesday. How far does she run in total over the two days? Give your answer as a mixed number.

(3)

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9 A water tank holds 12 litres when full. A tap removes 3 1/2 litres, then a hose adds 1 3/4 litres, then the tap removes another 2 1/5 litres. How much water is in the tank now? Give your answer as a mixed number, and state whether the tank is more than half full (half full = 6 litres).

(3)

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10 Work out 5 1/3 - 2 5/6. Give your answer in simplest form.

(2)

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Mark scheme · 1.9 Fractions: Adding and Subtracting: 30-minute Pack

Question 1

convert to improper fractions: 2 1/2 = 5/2, 3 3/4 = 15/4 and use common denominator	M1
add to get 25/4	M1
6 1/4 km cao	A1

Answer: **6 1/4 km**

Question 2

add 3/4 + 2/3 using common denominator 12: 9/12 + 8/12 = 17/12	M1
subtract 5/12: 17/12 - 5/12 = 12/12	M1
1 cao	A1

Answer: **1**

Question 3

common denominator 20 used: 15/20 and 2/20	M1
17/20 cao	A1

Answer: **17/20**

Question 4

6 1/3 cao	B1

Answer: **6 1/3**

Question 5

use common denominator 12 or equivalent: 9/12 + 10/12 + 8/12	M1
add numerators to get 27/12	M1
convert improper to mixed number 27/12 = 2 3/12	M1
2 1/4 kg cao	A1

Answer: **2 1/4 kg**

Question 6

15/20 cao	B1

Answer: **15/20**

Question 7

3/8 cao	B1

Answer: **3/8**

Question 8

correctly converts to a common denominator or improper fractions, 14/4 and 11/4	M1
correctly adds, 25/4	M1
6 1/4 km cao	A1

Answer: **6 1/4 km**

Question 9

correctly converts all amounts to twentieths, 240/20, 70/20, 35/20 and 44/20	M1
correctly combines in order, 240 - 70 + 35 - 44 = 161	M1
8 1/20 litres cao, and correctly states this is more than half full since 8 1/20 > 6	A1

Answer: **8 1/20 litres, which is more than half full**

Question 10

correctly converts to sixths, 32/6 and 17/6	M1
2 1/2 or 5/2 cao	A1

Answer: **2 1/2**

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