

Lesson 7 – Increasing/Decreasing by a Fraction

Starter

Find:

1) Find $\frac{3}{5}$ of 20

2) $\frac{3}{4} + \frac{2}{5}$

3) $2\frac{1}{2} - 1\frac{1}{3}$

4) Change 45% to a fraction in its simplest form

5) Write 50 as a fraction of 60 in its simplest form

Starter Answers

1) 12

2) $\frac{23}{20}$

3) $\frac{7}{6}$

4) $\frac{9}{20}$

5) $\frac{5}{6}$

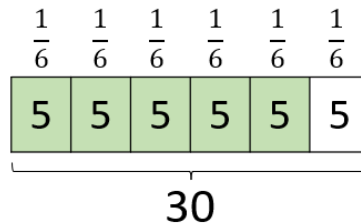
Example 1

Increase 30 by $\frac{5}{6}$

First we need to find $\frac{5}{6}$ of 30

$$30 \div 6 = 5$$

$$5 \times 5 = 25$$



So, $\frac{5}{6}$ of 30 is 25

Then we add 25 onto 30: $30 + 25 = 55$

Answer = 55

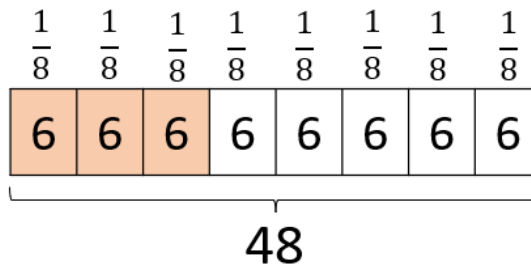
Example 2

Decrease 48 by $\frac{3}{8}$

First we find $\frac{3}{8}$ of 48

$$48 \div 8 = 6$$

$$6 \times 3 = 18$$



So, $\frac{3}{8}$ of 48 is 18

We need to subtract this from 48: $48 - 18 = 30$

Answer = 30

Your go

- 1) Increase 40 by $\frac{1}{5}$
- 2) Decrease £60 by $\frac{1}{10}$
- 3) Reduce 320g by $\frac{5}{8}$
- 4) Make \$48 $\frac{2}{3}$ bigger
- 5) Raise 80 by $\frac{3}{16}$

Answers

- | | | |
|---|---|---|
| 1) $\frac{1}{5}$ of 40 = 8
40 + 8 = 48 | 2) $\frac{1}{10}$ of £60 = £6
£60 - £6 = £54 | 3) $\frac{5}{8}$ of 320g = 200g
320g - 200g = 120g |
| 4) $\frac{2}{3}$ of \$48 = 32
\$48 + \$32 = \$80 | 5) $\frac{3}{16}$ of 80 = 15
80 + 15 = 95 | |

Example 3

Mary has a salary of £24,000.

She gets a pay rise of $\frac{1}{20}$ of her current salary.

What is her new salary?

$$\frac{1}{20} \text{ of } £24,000 = £1,200$$

$$£24,000 + £1,200 = £25,200$$

Example 4

Dan, Lewis and Gary did a test.

The test was out of 200.

Dan got $\frac{3}{5}$ of the test correct.

Lewis's score was 15% higher than Dan's.

Gary's score was $\frac{2}{3}$ lower than Dan's.

What score did each person get?

Dan
 $\frac{3}{5}$ of 200 = 120

Lewis
15% of 120 = 18
120 + 18 = 138

Gary
 $\frac{2}{3}$ of 120 = 80
120 - 80 = 40

Dan = 120
Lewis = 138
Gary = 40