PUBLIC SCHOOL DARBHANGA

SESSION (2020-21)
CLASS-VI
MATHEMATICS
Topic : FRACTIONS
(answer key)

1. Rafiq exercised for 3 / 6 of an hour, while Rohit exercised for 3 / 4 of an hour. Who exercised for a longer time?

Solutions:

Rafiq exercised = 3 / 6 of an hour Rohit exercised = 3 / 4 of a hour

3 / 6, 3 / 4

Convert these into like fractions 3 / 6 = (3 × 2) / (6 × 2)

= 6 / 12

3 / 4 = (3 × 3) / (4 × 3)

= 9 / 12

Clearly, 9 / 12 > 6 / 12

∴ 3 / 4 > 3 / 6

Therefore Rohit exercised for a longer time than Rafiq.

2. In a class A of 25 students, 20 passed with 60% or more marks; in another class B of 30 students, 24 passed with 60% or more marks. In which class was a greater fraction of students getting with 60% or more marks?

Solutions:

Total number of students in Class A = 25 Students passed in first class in Class A = 20

Hence, fraction = 20 / 25

= 4 / 5

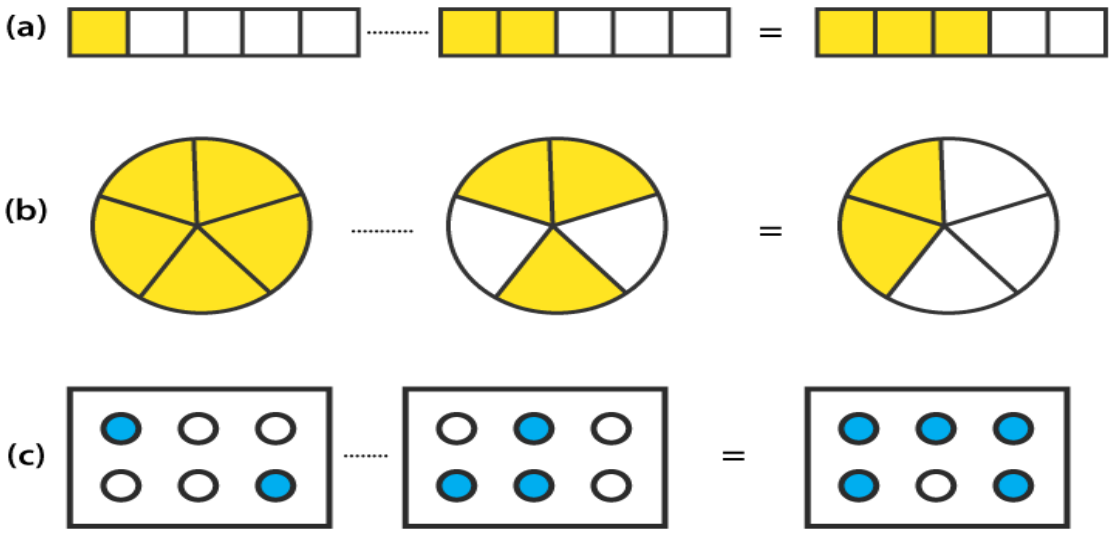
Total number of students in Class B = 30 Students passed in first class in Class B = 24

Hence, fraction = 24 / 30

= 4 / 5

∴ An equal fraction of students passed in first class in both the classes

3. Write these fractions appropriately as additions or subtractions:



Solutions:

(a) Total number of parts each rectangle has = 5 No. of shaded parts in first rectangle = 1 i.e 1 / 5 No. of shaded parts in second rectangle = 2 i.e 2 / 5 No. of shaded parts in third rectangle = 3 i.e 3 / 5

Clearly, fraction represented by third rectangle = Sum of the fractions represented by first and second rectangle

Hence, 1 / 5 + 2 / 5 = 3 / 5

(b) Total number of parts each circle has = 5

We may observe that first, second and third circles represent 5, 3 and 2 shaded parts out of 5 equal parts respectively. Clearly, fraction represented by third circle is the difference between the fractions represented by first and second circles.

Hence, 5 / 5 – 3 / 5 = 2 / 5

(c) Here we may observe that first, second and third rectangles represents 2, 3 and 5 shaded parts out of 6 equal parts respectively. Clearly, fraction represented by third rectangle is the sum of fractions represented by first and second rectangles.

Hence, 2 / 6 + 3 / 6 = 5 / 6

4. Solve:

(a) 1 / 18 + 1 / 18
(b) 8 / 15 + 3 / 15
(c) 7 / 7 - 5 / 7
(d) 1 / 22 + 21 / 22
(e) 12 / 15 - 7 / 15
(f) 5 / 8 + 3 / 8
(g) 1 - 2 / 3 (1 = 3 / 3)

Solutions:

(a) 1 / 18 + 1 / 18

= (1 + 1) / 18

= 2 / 18

= 1 / 9

(b) 8 / 15 + 3 / 15

= (8 + 3) / 15

= 11 / 15

(c) 7 / 7 – 5 / 7

= (7 – 5) / 7

= 2 / 7

(d) 1 / 22 + 21 / 22

= (1 + 21) / 22

= 22 / 22

= 1

(e) 12 /15 – 7 / 15

= (12 – 7) / 15

= 5 / 15

= 1 / 3

(f) 5 / 8 + 3 / 8

= (5 + 3) / 8

= 8 / 8

= 1

(g) 1 – 2 / 3

= 3 / 3 – 2 / 3

= (3 – 2) / 3

= 1 / 3

5. Shubham painted 2 / 3 of the wall space in his room. His sister Madhavi helped and painted 1 / 3 of the wall space. How much did they paint together?

Solutions:

Wall space painted by Shubham in a room = 2 / 3 Wall space painted by Madhavi in a room = 1 / 3 Total space painted by both = (2 / 3 + 1 / 3)

= (2 + 1) / 3

= 3 / 3

= 1

∴ Shubham and Madhavi together painted 1 complete wall in a room.