Q:1 Simplify: $4\frac{2}{3} \div \frac{7}{6} - (4\frac{5}{4} of 16 - 14 of 3\frac{2}{7})$

1. 42
2. -42
3. -34
4. 34

Q:2 Direction: Simplify and find the value of question marks (?) in the following questions.

175 - 122 ÷ (148 ÷ 4 × 2 - 13) = ? + 23 × 19

1. 244
2. 384
3. -264
5. 247

Q:3 Simplify:

$77 \div [\frac{6}{15} \times \frac{3}{4} + (\frac{1}{2} \times \frac{2}{3} \div \frac{3}{4} of \frac{4}{5})]$

1. 80
2. 90
3. 100
4. 127

Q:4 Simplify -

42 × [78 ÷ {8 + 2 (16 - 7)}]

1. 126
2. 108
3. 145
4. 105

Q:5 Simplify the following.

24/5 ÷ {15/8 - 5/8(2/4 + 15/8 - 3/5)}

1. 3.7
2. 5.8
3. 6.3
4. 9.4

Q:6 Find the value of x:

x = (66 ÷ 3.3 + 2) × (5 × 7.2 - 16)

1. 440
2. 430
3. 400
4. 460

Q:7 Arrange the mixed fractions in ascending order.

$1\frac{2}{11}, 3\frac{4}{7}, 7\frac{4}{3}, 2\frac{7}{4}$

1. $3\frac{4}{7} > 7\frac{4}{3} > 1\frac{2}{11} > 2\frac{7}{4}$
2. $1\frac{2}{11} < 3\frac{4}{7} < 2\frac{7}{4} < 7\frac{4}{3}$
3. $1\frac{2}{11} < 2\frac{7}{4} < 3\frac{4}{7} < 7\frac{4}{3}$
4. $2\frac{7}{4} < 1\frac{2}{11} < 3\frac{4}{7} < 7\frac{4}{3}$

Q:8 What will come in place of question mark (?) in the following question?

[(11/5) + (4/21) of (42) - (18/5) ÷ (27/45)]

1. 1/5
2. 21/5
3. 12/5
4. 14/5

Q:9 Evaluate:

20% of 300 - {40 ÷ 1/$(2)^{-1}$}$[5.64 + 0.36]^2$

1. 1440
2. 480
3. -660
4. 720

Q:10 What will come in place of question mark (?) in the following question?

5/2[5 ÷ 25 + 1/5{15 + 7/3(9 - 6/7) - 15}] = ?

1. 15
2. 10
3. 12
4. 20

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Answer Key

1. (3)	**2.** (3)	**3.** (2)	**4.** (1)	**5.** (3)
6. (1)	**7.** (3)	**8.** (2)	**9.** (3)	**10.** (2)

Answers and Solutions

Q:1 The correct answer is **Option 3** i.e. **-34.**

$4\frac{2}{3} \div \frac{7}{6} - (4\frac{5}{4} of 16 - 14 of 3\frac{2}{7})$

Now, on applying the BODMAS rule

$\Rightarrow \frac{14}{3} \div \frac{7}{6} - (\frac{21}{4} \times 16 - 14 \times \frac{23}{7})$

$\Rightarrow \frac{14}{3} \times \frac{6}{7} - (21 \times 4 - 2 \times 23)$

$\Rightarrow 4 - (84 - 46)$

$\Rightarrow 4 - 38$ = -34

Q:2 The correct answer is **option 3** i.e. **-264.**

175 - 122 ÷ (148 ÷ 4 × 2 - 13) = ? + 23 × 19

By using the BODMAS rule:

⇒ 175 - 122 ÷ (37 × 2 - 13) = ? + 437

⇒ 175 - 122 ÷ 61 - 437 = ?

⇒ 175 - 2 - 437

⇒ ? = -264

Q:3 The correct answer is **option 2** i.e. **90.**

Explanation:

Accprding to the given question,

$\Rightarrow 77 \div [\frac{6}{15} \times \frac{3}{4} + (\frac{1}{2} \times \frac{2}{3} \div \frac{3}{4} of \frac{4}{5})]$

$\Rightarrow 77 \div [\frac{6}{15} \times \frac{3}{4} + (\frac{1}{2} \times \frac{2}{3} \div \frac{3}{5})]$

$\Rightarrow 77 \div [\frac{6}{15} \times \frac{3}{4} + (\frac{1}{2} \times \frac{10}{9})]$

$\Rightarrow 77 \div [\frac{6}{15} \times \frac{3}{4} + \frac{5}{9}]$

$\Rightarrow 77 \div [\frac{3}{10} + \frac{5}{9}]$

$\Rightarrow 77 \div \frac{77}{90}$

⇒ 90

Hence the required answer is 90.

Q:4 The correct answer is **Option 1** i.e. **126.**

42 × [78 ÷ {8 + 2 (16 - 7)}]

= 42 × [78 ÷ {8 + 2 (9)}]

= 42 × [78 ÷ {8 + 18}]

= 42 × [78 ÷ 26]

= 42 × 3

= 126

Q:5 The correct answer is **Option 3** i.e. **6.3.**

24/5 ÷ {15/8 - 5/8(2/4 + 15/8 - 3/5)}

= 24/5 ÷ {15/8 - 5/8{(20 + 75 - 24)/40)}

= 24/5 ÷ {15/8 - 5/8(71/40)}

= 24/5 ÷ {15/8 - 71/64}

= 24/5 ÷ {(120 - 71)/64}

= 24/5 ÷ 49/64

= (24/5) × (64/49)

= 1536/245

= 6.3

Q:6 The correct answer is **option 1** i.e. **440.**

Calculations:

⇒ x = (66 ÷ 3.3 + 2) × (5 × 7.2 - 16)

⇒ x = (20 + 2) × (36 - 16)

⇒ x = 22 × 20

⇒ x = 440

Q:7 The correct answer is **Option 3** i.e. $1\frac{2}{11} < 2\frac{7}{4} < 3\frac{4}{7} < 7\frac{4}{3}$.

First, change the mixed fraction to the normal fraction and find the LCM of the denominators

13/11 , 15/4 , 25/3 , 15/4

LCM = 132

Thus,

Fraction 1 = 13/11 × 12/12 = 156/132

Fraction 2 = 25/4 × 33/33 = 825/132

Fraction = 25/3 × 44/44 = 1100/132

Fraction = 15/4 × 33/33 = 495/132

Comparing numerators,

156 < 495 < 825 < 1100

Therefore, ascending order of fractions is,

$1\frac{2}{11} < 2\frac{7}{4} < 3\frac{4}{7} < 7\frac{4}{3}$

Q:8 The correct answer is **option 2** i.e. **21/5.**

⇒ [(11/5) + (4/21) of (42) - (18/5) ÷ (27/45)]

⇒ [(11/5) + (4/21) × 42 - (18/5) × (45/27)]

⇒ [(11/5) + 8 - 6]

⇒ [(11/5) + 2]

⇒ 21/5

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Q:9 The correct answer is **option 3** i.e. **-660.**
20% of 300 - $\{40 \div 1/(2)^{-1}\}[5.64 + 0.36]^2$
By using the BODMAS rule:
$= (20/100) \times 300 - (40 \div 2)[6.00]^2$
$= 60 - 20\ [36]$
$= 60 - 720$
$= -660$

Q:10 The correct answer is **option 2** i.e. **10.**
We have to find the value of the question mark (?)
$\Rightarrow 5/2[5 \div 25 + 1/5\{15 + 7/3(9 - 6/7) - 15\}] = ?$
Now using the BODMAS rule
$\Rightarrow 5/2[5 \div 25 + 1/5\{15 + 7/3(57/7) - 15\}] = ?$
$\Rightarrow 5/2[5 \div 25 + 1/5\{15 + 19 - 15\}] = ?$
$\Rightarrow 5/2 \times [5 \div 25 + 19/5] = ?$
$\Rightarrow 5/2 \times [1/5 + 95/25] = ?$
$\Rightarrow 5/2 \times [4] = ?$
$\Rightarrow ? = (5 \times 2)$
Hence
$\Rightarrow ? = 10$

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