

Facit til Kernestof Mat 1 HF – Træningssider 9

1

- a) 3
- b) 19
- c) 0

2

- a) 32
- b) 0
- c) 49

3

- a) 1
- b) 0
- c) 33

4

- a) 0
- b) 0
- c) 70

5

- a) $\frac{1}{16}$
- b) 1
- c) $\frac{1}{2}$

6

- a) $\frac{1}{100} = 0,01$
- b) $\frac{4}{100} = 0,04$
- c) $\frac{50}{10} = 5$

7

- a) $\frac{1}{256}$
- b) 0,2
- c) $\frac{1}{10} = 0,1$

8

- a) 3
- b) $\frac{1}{5} = 0,2$
- c) 2

9

- a) 3
- b) $\frac{1}{2}$
- c) 5

10

- a) $\frac{1}{7}$
- b) $\frac{1}{8}$
- c) 1

11

- a) 4
- b) 9
- c) 8

12

- a) 7
- b) 3
- c) 4

13

- a) $7^5 = 16807$
- b) $3^{13} = 1594323$
- c) $2^{18} = 262144$

14

- a) $2(x-1) = 4$
 $2x-2 = 4$
 $2x-2+2 = 4+2$
 $2x = 6$
 $\frac{2x}{2} = \frac{6}{2}$
 $x = 3$

$$\begin{aligned}
 \text{b) } 1-x &= -3x+3 \\
 1-x+3x &= -3x+3+3x \\
 1+2x &= 3 \\
 1+2x-1 &= 3-1 \\
 2x &= 2 \\
 \frac{2x}{2} &= \frac{2}{2} \\
 x &= 1
 \end{aligned}$$

$$\begin{aligned}
 \text{c) } 2-(x-1) &= 4 \\
 2-x+1 &= 4 \\
 3-x &= 4 \\
 3-x+x &= 4+x \\
 3 &= 4+x \\
 3-4 &= 4+x-4 \\
 -1 &= x
 \end{aligned}$$

15

$$\begin{aligned}
 \text{a) } 5 + 3(6-x) &= 8, \\
 5 + 18 - 3x &= 8 \\
 23 - 3x &= 8 \\
 23 - 3x + 3x &= 8 + 3x \\
 23 &= 8 + 3x \\
 23 - 8 &= 8 + 3x - 8 \\
 15 &= 3x \\
 \frac{15}{3} &= \frac{3x}{3} \\
 5 &= x
 \end{aligned}$$

$$\begin{aligned}
 \text{b) } 1-2(2-x) &= x \\
 1-4 + 2x &= x \\
 -3 + 2x &= x \\
 -3+2x + 3 &= x+3 \\
 2x &= x+3 \\
 2x-x &= x+3-x \\
 x &= 3
 \end{aligned}$$

$$\begin{aligned}
 \text{c) } 2-3(1+2x) &= 5 \\
 2 - 3 - 6x &= 5 \\
 -1 - 6x &= 5 \\
 -1 - 6x + 6x &= 5 + 6x \\
 -1 &= 5 + 6x \\
 -1 - 5 &= 5 + 6x - 5 \\
 -6 &= 6x \\
 \frac{-6}{6} &= \frac{6x}{6} \\
 -1 &= x
 \end{aligned}$$

16

a) $7 - 3(x-3) = 2(1-x)$

$$7 - 3x + 9 = 2 - 2x$$

$$16 - 3x$$

$$2 - 2x$$

$$16 - 3x + 3x = 2 - 2x + 3x$$

$$16 = 2 + x$$

$$16 - 2 = 2 + x - 2$$

$$14 = x$$

b) $6 + 4(3-2x) = 4x$

$$6 + 12 - 8x = 4x$$

$$18 - 8x = 4x$$

$$18 - 8x + 8x = 4x + 8x$$

$$18 = 12x$$

$$\frac{18}{12} = \frac{12x}{12}$$

$$1,5 = x$$

c) $9 - 3(2-x) = 2 - 3(1-x)$

$$9 - 6 + 3x = 2 - 3 + 3x$$

$$3 + 3x = -1 + 3x$$

$$3 + 3x - 3x = -1 + 3x - 3x$$

$3 = -1$ hvilket ikke stemmer dvs. ingen løsning

17

a) $\frac{3}{10}$

b) $\frac{6}{30} = \frac{1}{5}$

18

a) $\frac{12}{2} = 6$

b) $\frac{10}{6} = \frac{5}{3}$

19

a) $\frac{2}{12} = \frac{1}{6}$

b) $\frac{6}{6} = 1$

20

a) $\frac{12}{6} = 2$

b) $\frac{6}{2} = 3$

c) $\frac{40}{5} = 8$

21

a) $\frac{20}{5}=4$

b) $\frac{12}{3}=4$

c) $\frac{1}{2}$

22

a) $\frac{6}{10}=\frac{3}{5}$

b) $\frac{20}{25}=\frac{4}{5}$

c) $\frac{6}{12}=\frac{1}{2}$