1   Interest: Investing Money

Relating Units of Time

1. Becky has been working at a flower shop for 2.15 yr.

> **Hint**
> Use
> 1 yr (year)
>   = 365 d (days)
>   = 52 wk (weeks)
>   = 12 mo (months)
>
> 1 mo = 30 d

  a) How long is this in weeks? Round up.

     2.15 yr $\times$ _____ wk/yr is about _____ wk

  b) How long is this in days? Round up.

     2.15 yr $\times$ _____ d/yr is about _____ d

2. Write each length of time as a fraction of the unit given.

  a) $6 \text{ d} = \dfrac{\boxed{}}{365} \text{ yr}$
        c) $18 \text{ wk} = \dfrac{\boxed{}}{\boxed{}} \text{ yr}$

  b) $35 \text{ d} = \dfrac{\boxed{}}{\boxed{}} \text{ yr}$
        d) $8 \text{ d} = \dfrac{\boxed{}}{\boxed{}} \text{ mo}$

Working with Percents

Percent means "out of 100."
1% is the same as 1 hundredth, or $\frac{1}{100}$, or 0.01.

32% is the same as 32 hundredths, or $\frac{32}{100}$, or 0.32.

32.5% is between 32% and 33%. So, it is between 0.32 and 0.33.

Ones	Tenths	Hundredths	Thousandths
0	3	2	5

32.5% = 0.325

> **Hint**
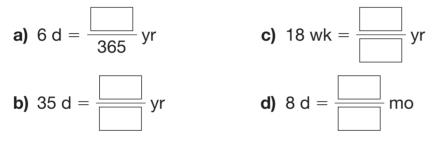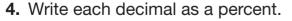> The whole number part of the percent ends with the number of hundredths in the decimal.

3. Write each percent as a decimal.

  a) 9% = _____
        d) 4.8% = _____

  b) 25% = _____
        e) 11.9% = _____

  c) 79% = _____
        f) 0.8% = _____

> **Hint**
> To write a decimal as a percent, write the number of hundredths.
> **0.75** = 75%
> 0.**39**9 = 39.9%

4. Write each decimal as a percent.

  a) 0.02 = _____%
        d) 0.269 = _____%

  b) 0.58 = _____%
        e) 0.005 = _____%

  c) 0.45 = _____%
        f) 0.152 = _____%

5. Calculate each percent.

a) 10% of 280 = _____

b) 6% of 275.5 = _____

c) 7.5% of 200 = _____

d) 0.8% of 620 = _____

Multiplying Decimals and Fractions

6. Multiply.

Tech Tip

Multiplying a Decimal by a Fraction

To multiply $5.2 \times \frac{4}{5}$, enter

5.2 [×] $\frac{4}{5}$, enter

5.2 [×] 4 [÷] 5 [=]

a) $1.64 \times \frac{3}{4} =$ _____

b) $0.05 \times \frac{60}{365} =$ _____

c) $1.98 \times \frac{7}{52} =$ _____

d) $4.453 \times \frac{5}{12} =$ _____

Solving Equations

7. Solve for each variable.

a)
$$3s + 11 = 35$$
$$3s + 11 - 11 = 35 - 11$$
$$3s = \text{_____}$$
$$s = \text{_____}$$

b) $1.1d = 44$

c) $2 = \frac{t}{5} - 4$

d) $0.85 = \frac{6.12}{n}$

Calculating with Exponents

An exponent shows how many times a number is multiplied by itself.

$$5(2)^2 = 5 \times 2 \times 2$$
$$= 5 \times 4$$
$$5(2)^{3 \times 2} = 5(2)^6$$
$$= 5 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$$
$$= 5 \times 64$$
$$5(0.1 + 0.5)^3 = 5 \times 0.6 \times 0.6 \times 0.6$$
$$= 5 \times 0.216$$

Tech Tip

Square Key (x^2)
To calculate $5(2)^2$, enter
5 [×] 2 [x^2] [=]

Tech Tip

Exponent Key (y^x)
Use the exponent key for exponents other than 2.
For $5(2)^6$, enter
5 [×] 2 [y^x] 6 [=]

8. Calculate.

a) $5(3)^2 =$ _____

b) $8(2.3)^5 =$ _____

c) $2.8(1.8)^4 =$ _____

d) $4(5)^{3 \times 2} =$ _____

e) $4.25(0.8)^{4 \times 2} =$ _____

f) $7.62(1 + 0.1)^5 =$ _____